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ABSTRACT

This report provides a description of the steps in planning the assessment of reading on a statewide basis. Work on the 1974 Oregon Statewide Assessment Program began in September 1973 and culminated in a set of reports and related informational packets in November 1974. The assessment plan involved the following procedures: selection of 25 reading objectives grouped into the four areas of word attack, vocabulary comprehension, and application skills; selection of 96 items for a reading test; sampling of a scientifically drawn sample of fourth grade pupils; testing; analysis of the assessment data; and review and interpretation. Results of the testing are discussed and recommendations for action are proposed. Some of the findings are that the general performance across the state was good; the relative performance of the district types was consistent across the four skill domains; and the performance across the state was lower for comprehension and application skills than for word attack and vocabulary skills. Numerous tables and graphs illustrate the findings of the assessment. (MKM)

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IMPACT OF OREGON EDUCATION:
A PILOT ASSESSMENT OF READING 1974

OREGON STATEWIDE ASSESSMENT PROGRAM

GENERAL REPORT

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November 1974

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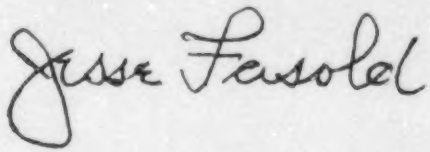
FOREWORD

In 1973 the Oregon Department of Education began implementing the Oregon Statewide Assessment Program to provide information upon which critical educational decisions would be based. Information about students and their achievement will ultimately lead to the improvement of learning opportunities for Oregon's students.

Two features of this assessment program are particularly noteworthy: teachers, administrators, students and parents have become increasingly involved in each phase of the assessment; and specific educational objectives identified as important for Oregon students have been measured. These features together indicate that the concerns and goals of Oregon citizens for their children's education will be incorporated in the assessment and in the state's educational programs.

Developing an assessment program which successfully serves the needs of diverse audiences interested in improving Oregon education is a tremendous endeavor. I am proud that the Department can present the conclusions and recommendations of this year's assessment program for consideration by all concerned citizens.



Jesse Fasold
Superintendent
Public Instruction

ACKNOWLEDGMENTS

The success of the 1973-74 Oregon Statewide Assessment Program was dependent upon the cooperation and contributions of hundreds of people (many of whom Department staff never met). Educators, citizens and students from every area of the state participated in implementing this first statewide assessment. This general report and other assessment products could not have been developed without their efforts.

Though each contributor deserves to be personally recognized, only a few can be. But to all who gave of their experience and time, thank you.

Special note must be made of some groups:

- The Statewide Assessment Advisory Committee, whose members successfully brought their diverse experiences to bear on numerous difficult decisions affecting policies and procedures.
- The Intermediate Education District (IED) coordinators, who strengthened communication between local school and state personnel, and provided advice and assistance on many technical and logistical problems.
- The many teachers, principals, local district administrators, and citizens who contributed their time and effort in order to determine the assessment content, administer assessment tests, and interpret assessment results.
- Program directors and staff of the Oregon Department of Education, who assisted in reviewing procedures and materials, and advising the statewide assessment staff on solving many of the problems which confront any new program.

The names of persons who served as advisors for the 1973-74 Oregon Statewide Assessment are contained in Appendix A of this report.

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SECTION I: BACKGROUND

Since the day a teacher sat on one end of a log and attempted to communicate his knowledge to a pupil on the other, the teacher, the student, the teacher's teachers, the student's parents and relatives, the school board, and the taxpayer have asked, "Is there a better way?"

As the costs of education go up, more and more people ask whether public education provides a "reasonable" return for the time, money and effort invested. With achievement vs. cost an ever increasing focus of inquiry, the Oregon educational system grows continuously more critical of its processes and more sensitive to the need for comprehensive, responsive planning and evaluation. Education, like industry, should be viewed as a dynamic entity that improves over time only through continual monitoring and adjustment. In 1972, the Oregon Department of Education began to develop such a monitoring system.

The first step in monitoring education involves identifying and setting educational goals—goals to answer the questions: (a) What competencies does a person need in order to cope with modern society? and (b) What responsibilities do schools have in helping individuals develop these competencies?

To answer these questions and respond to the changing needs of Oregon learners, the Oregon State Board of Education, on February 8, 1974, set forth six goals for public schools. These goals were conceived and endorsed by Oregon citizens to provide every elementary and secondary school student the opportunity to learn to function effectively within six life roles: Individual, Learner, Producer, Citizen, Consumer, and Family Member. Each goal expresses the general knowledge, skills, and attitudes needed to function in these life roles.

The second step in the state-level planning and evaluation system is to survey student performance in the educational goal areas; that is, to conduct an assessment. Assessment was begun in Oregon in 1973, when the Legislature authorized the use of state and federal funds for a statewide assessment program. The findings of that assessment will, in turn, help to focus activities during the next stages of the planning and evaluation cycle: identifying and prioritizing educational needs. Then alternative plans for meeting these needs can be considered, one plan selected and implemented, and its success evaluated. Finally, with the conclusion of the full cycle, new goals, priorities or plans can be established.

The important implications of this system are that the best intentions—the best educational goals—cannot be acted upon until we know what is needed. And that information is what assessment helps provide. Assessment fits into the total planning model by identifying what Oregon students know *now* in relation to ultimate goals. The discrepancy between the goals for student learning and what students know helps determine priority needs.

Because 1974 was the first year of the assessment program, state-level educational priorities have been based on surveys of citizens, data from previous statewide testing programs, and other information the Department had available. In future years, priority areas will be revised, with the help of the assessment results.

For 1974-77 Oregon State Board of Education priorities are as follows:

1974-77 INSTRUCTION-RELATED PRIORITIES

- Improve Early Childhood and Primary Education
- Increase Opportunities for the Development of Reading Skills
- Continue to Expand Career Education
- Emphasize the Fourth "R": Responsibility
- Improve Health Education

1974-77 MANAGEMENT-RELATED PRIORITIES

- Close the Communication Gap
- Systematically Assess the Progress of Education in Oregon
- Continue to Improve the Financing of Oregon Education
- Improve the Instructional and Management Practices of Oregon Schools

These priorities have become the major focus both for legislative programs to be introduced in the 1975 session and for state policies. The proposed legislation is described in Section IV of this report. The state policies affect the new Minimum Standards for Graduation from High School, which went into effect in 1974 for this year's ninth graders. These standards focus on the priority areas of career education, citizenship, and the acquisition of survival skills.

Both the Board and the Legislature wanted to obtain student performance data to assist them and other interested audiences in formulating state educational policies. The questions and concerns of state-level decision makers were primary considerations in determining what data to collect.

Information gathered from statewide assessment will be helpful in making a variety of decisions.

The Legislature should find that assessment results assist them in:

- Allocating state resources to achieve special program outcomes, such as diagnosing students with special reading problems
- Providing citizens with goal-oriented achievement information regarding the effectiveness of public education programs

The Oregon State Board of Education should use assessment results in:

- Developing state priorities for public education
- Determining the status and progress of students in relation to the State Goals for Elementary and Secondary Schools
- Reporting and making recommendations to the Legislature
- Aiding the Teachers Standards and Practices Commission in determining standards for teacher certification
- Allocating the Department's resources
- Determining areas of emphasis in developing preservice and inservice models for teachers, and providing technical assistance to schools

The Oregon Department of Education should use assessment results in:

- Providing a model for district-level program evaluations
- Setting priorities for considering project proposals in federally funded programs
- Providing data to aid in evaluating Department programs

Although the statewide assessment is primarily meant for state-level decisions, other audiences should find the assessment report helpful as well.

The Intermediate Education Districts, local districts, and schools should find the assessment useful for:

- Serving as a model for evaluating the local program's effectiveness in preparing students to meet the State Goals for Elementary and Secondary Schools
- Specifying specific skill areas for teacher inservice training
- Identifying important instructional objectives
- Identifying specific objectives for which additional instruction is needed
- Selecting textbooks and curriculum materials to teach skills shown by the assessment to be weak

Other audiences to whom the program was relevant include:

- *Parents and the General Public*
  To determine how well students are performing in critical skill areas, and help shape local or state programs needed to correct differences or maintain strengths.
- *College and University Personnel*
  To determine areas of strength or weakness in students' performance which might have implications for future preparation of teachers and curriculum specialists. To identify additional areas for needed research on how different curriculum materials and teaching strategies affect learning.
- *Textbook Committees*
  To identify areas which should be emphasized in future textbooks.

SECTION II
HISTORY, PROCEDURE AND FUTURE PLANS

HISTORY OF ASSESSMENT

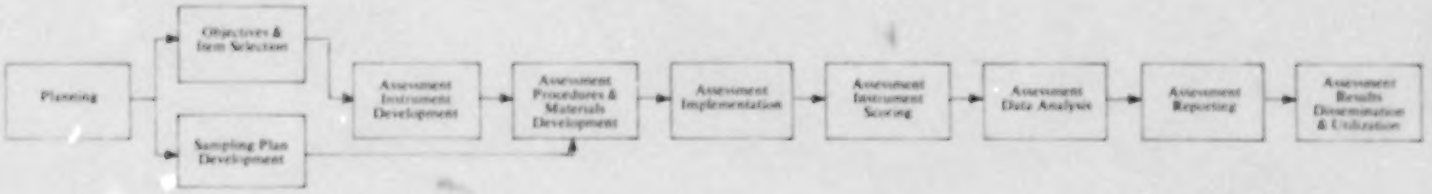
Educational policies and funding have been major concerns for the Oregon Legislature throughout its history. Legislators, responding to information presented in the 1971-73 Biennial Report, provided state-level funding to help launch the first statewide assessment of student performance.

The Joint Ways and Means Committee of the 1973 Legislative Assembly allocated $100,000 to this initial task. The $50,000 annual state allocation provided approximately 20 percent of the 1973-74 assessment program budget, with federal funds providing the balance. Previously, only federal funds had been allocated for statewide educational testing.

Through the mutual desire of the State Superintendent of Public Instruction and the Oregon Legislature, and with joint funding at state and federal levels, Oregon's first statewide assessment was initiated.

PROCEDURES FOR THE ASSESSMENT

Work on Oregon's Statewide Assessment Program began in September 1973 with the development of a multi-component plan.



Given the goal that the assessment would reflect the instructional curriculum and concerns of Oregon, each component was newly developed for this first assessment. With this goal in mind, the assessment staff requested continual advice from educators and other concerned citizens about each phase of the assessment. Although assessment procedures are outlined below, a detailed description is given in Volume II of the technical report.

WHAT TO MEASURE

One of the first tasks was to define what the assessment should measure. To determine how children in every grade were performing in every subject would have been all but impossible in terms of time and expense. Instead, the State Superintendent of Public Instruction decided that assessment should begin with one subject recognized by the State Board of Education as an area of priority need: reading.

Though many nationally standardized reading tests were available, Oregon chose to let the people of the state determine what was important for their children to know about reading. Over 550 persons were involved in selecting the 25 reading skills, or objectives, that were measured by this assessment. Test items were selected to measure attainment of these objectives. The test items came from the collections of the Instructional Objectives Exchange and the National Assessment of Education Progress. From this pool, members of the Oregon Department of Education and the Oregon Right-to-Read Advisory Committee adapted 96 items to be used in the assessment.

SELECTING SUBJECTS

The second major decision concerned which children to test, and how many to test. Though reading is emphasized throughout the first four grades, by grade four, children have usually developed a sizable repertoire of reading skills, and have begun to use those skills consistently and effectively to enhance learning. For this reason, fourth graders were selected as subjects for the reading assessment.

It was not necessary, however, to test all fourth graders in the state in order to obtain accurate information. Just as in national opinion polls, a relatively small number of persons (called a sample) could participate, but the results could be reported as if everyone had been tested. This procedure allowed the assessment staff to collect very accurate information efficiently and economically.

The 102 schools in the sample were selected on the basis of three school district characteristics: geographical location, district wealth and district size. This insured that the sample would equitably represent the 832 schools in the state providing instruction to fourth grade pupils.

HOW AND WHEN TO ASSESS

The reading assessment was held on April 24, 1974. Fourth grade teachers in the sample schools gave the test to their own children, using test materials assembled and distributed by the Educational Testing Service (ETS). The teacher also provided descriptive information about each tested student. All tests were then returned to ETS for scoring.

ANALYZING THE DATA

Because the various audiences for Oregon Statewide Assessment reports had different information needs, the assessment data was subjected to several kinds of statistical analyses. The analyses addressed two basic questions:

- What were the identified characteristics of fourth grade students in the sample?
- How did children perform on the test?

USING THE DATA

Oregon's assessment program is unique in that as much time and effort are being devoted to generating recommendations for corrective action as to actively collecting assessment data. A common weakness of past programs has been a lack of attention to insuring that data is adequately disseminated or that it generates corrective action.

In addition, the program is unique in that it takes the additional step of identifying instructional materials related to tested objectives. Such materials may be used by classroom teachers to instruct their students in the reading skills identified by those objectives.

To make the interpretations and recommendations relevant for Oregon students, teachers, reading specialists, principals, superintendents, and parents from various areas within the state met to examine the computed results of the assessment. Also participating were Department personnel and assessment specialists from the Northwest Regional Educational Laboratory and the Research Triangle Institute of North Carolina.

Recommendations based on their review and interpretations are emphasized in the last section of this report. Lists of suggested curriculum materials and techniques are contained in Volume III of the technical report, which may be published as a supplementary document.

WHAT ABOUT THE FUTURE?

The 1973-74 assessment served as a pilot for the reading assessment test and procedures. As a result of this year's experience, those procedures have been refined, and assessment can profitably be expanded to other subjects.

Future plans include a pilot of a fourth grade math test in 1975, a retesting of fourth grade reading in April 1975, and planning for citizenship assessment of graduating students. In 1975-76, the citizenship assessment will be piloted, and the fourth grade math assessment will be conducted. In addition, the assessment staff are preparing a ten-year plan for the assessment program.

The conclusions and recommendations emanating from this first assessment are valuable, and indicate immediate actions for improving Oregon's reading programs. But this year's results do not provide all the answers to educators, legislators, and the public; no assessment can provide all the information everyone wants. Frequently, as many new questions are raised by an assessment as there are answers provided. For at least three reasons, however, assessment results can become more useful in successive years of testing: (1) tests and testing procedures improve with repeated use and revision; (2) prior assessments can be used to accumulate longitudinal data; and, (3) based on those data, gains and losses in performance can be measured.

SECTION III: RESULTS AND INTERPRETATION

Read is a simple word.

Yet, put the word by itself and you can only guess how to pronounce it: long "e" as in seed, or short "e" as in led.

According to Webster's Unabridged Dictionary, read can be a noun, adjective, transitive, or intransitive verb, and can have any of 31 variant meanings.

The name of the read game is itself a prime indicator of the problem of learning to read—learning to pronounce a word, to understand it in context, to use it appropriately. Reading is recognized as one of the most basic skills for surviving in a society which grows forever more complex.

Just as the word read has come to have at least 31 meanings, so have other words evolved many meanings. Common definitions for some are vital to the understanding of this report. One is *assessment*, a word which appears throughout this report and is defined as: "A process designed to provide information at a given point in time describing how an individual or group is performing in relation to desired goals."

It is important to understand from this definition that the following results are valid only within the parameters set for the assessment program—that is, these results are intended to apply to the statewide fourth grade population as a whole. It is not appropriate to use these results to judge the performance of a single student, a single teacher or a single district—or to make comparisons among them.

Last April 24, some 4,108 fourth graders in school districts in every section of Oregon were administered a test—perfected as far as was practical—that constituted the initial step toward identifying learning problems among Oregon students and determining solutions to those problems. The 4,108 fourth graders comprised a representative sample of the population in an historic pilot Oregon reading assessment: an organized process "at a given point in time" to measure how groups of children are performing in relation to the desired statewide goals for elementary and secondary education.

Although most people in our society readily agree that reading is an important skill, and it is prominently listed among the learner skills that comprise Oregon's educational goals and instructional priorities, "reading" does not mean the same thing to everyone. For this reading assessment, no single definition of the word was attempted. Instead, educators from across the state were asked to establish priorities from among 47 reading objectives. The 25 top-rated objectives were measured on the assessment test, and grouped into four logical domain areas: word attack skills, vocabulary skills, comprehension skills and application skills. Definitions of these terms, a list of the objectives which measured them, results of student performance in these areas, and interpretive comments are provided in the pages immediately following this section.

There are many obstacles to learning other than the difficulties of acquiring skills and knowledge. Obstacles may be physical and mental, economic and sociological, inherent and environmental. Information on these factors is essential to the analysis and understanding of student performance results. Therefore, several other types of information (called "reporting variables") were determined either through the sampling design or through questions asked of teachers in participating schools. These reporting variables included:

- Region of the state in which the child's school was located
- Wealth of the district in which the child attended school
- Size of the district in which the school was located
- Sex of the child
- Age of the child
- Race of the child
- Whether the child was participating in a compensatory education program financed by Title I of the Elementary and Secondary Education Act
- Whether the child had been diagnosed by a teacher or another educational specialist as needing remedial work in reading
- Whether the child was receiving corrective or remedial services of some type

In addition, information was gathered on whether the child was physically or mentally handicapped, or was classified as bilingual. Since an insufficient number of children in these latter categories were identified to permit appropriate statistical analysis, this year's assessment results do not reflect these two variables. Re-designed procedures should provide better data on these two variables in subsequent assessments.

Definitions, results and interpretations of reporting variables are provided following discussion of the reading domains.

Domain Performance

Skills and knowledge related to reading at the primary school level may be divided into four categories or domains. As noted earlier, these are labeled *word attack, vocabulary, comprehension* and *application*. Each of these domains is defined below, with a report on levels of student performance for each objective within the domain. Interpretative comments are also provided. Following this section is a general summary of these results.

Word Attack Skills

This area is defined as those skills which aid a reader in unlocking unknown words. Included in word attack skills are such abilities as associating sounds with letters, recognizing frequently used words, and dividing words into syllables. An example is a child's ability to determine that "won't" is a contraction of "will not".

Table 1 identifies each of the nine objectives chosen for this domain. The middle column states the average score for all students on test items related to this objective. The final column provides an interpretative comment indicating whether the performance was satisfactory, and whether unusually high or low results were obtained. It should be noted that these comments represent the collective opinions of panels of teachers and reading specialists who reviewed the scores. Other individuals or groups may or may not have similar opinions.

TABLE 1
STATE PERFORMANCE ON WORD ATTACK SKILLS

Objective	Percent Correct (0% 25% 50% 75% 100%)	Interpretation
Domain: Word Attack		
1—Identifying Spoken Words		• Performance was as expected and was satisfactory
2—Identifying Vowel Sounds		• Interpretation not attempted due to flaws in test questions
3—Identifying Silent Letters		• Performance was higher than expected and was satisfactory
4—Identifying "y" Sounds		• Performance was lower than expected. No further interpretations were attempted because of disagreement over the importance of the objective and the possibility that the test questions were flawed
5—Identifying Hard and Soft "c" and "g" Sounds		• Performance was higher than expected and was satisfactory
6—Identifying Vowel Sounds		• Performance was lower than expected and was less than satisfactory
7—Identifying Double Vowel Sounds		• Interpretation was not attempted due to flaws in test questions
8—Identifying Contraction Components		• Performance was as expected and was satisfactory
9—Identifying Syllables		• Performance was lower than expected and less than satisfactory

In summary, student performance in the area of word attack skills showed scores which were satisfactory or higher than anticipated on four objectives and scores which were less than satisfactory on three objectives. Interpretation on the other two objectives was hampered by flaws or errors in the test itself. Plans are underway to correct these problems in the 1975 reading assessment.

Vocabulary Skills

These skills help the reader extract meaning from words. Included in vocabulary skills are using the context of a passage to understand an unknown word or identifying the intended meaning of a word that has more than one possible meaning. An example of a skill within this domain is the student's ability to identify the intended meaning of the word "shock" as used in the sentence: "Getting the money was a shock to me." Possible choices given the student were: (1) a surprise; (2) a feeling caused by an electric current; or (3) the movement of an earthquake.

Table 2 contains the two objectives selected for this area, the average scores of all students on the test items related to these objectives, and interpretative comments by reading specialists.

TABLE 2
STATE PERFORMANCE ON VOCABULARY SKILLS

Objective	Percent Correct (0% 25% 50% 75% 100%)	Interpretation
Domain: Vocabulary		
10—Determining Missing Words Using Context		• Performance was as expected and was satisfactory
11—Determining Intended Meaning Using Context		• Performance was lower than expected and was less than satisfactory

In summary, students performed satisfactorily on only one of these two objectives. In reviewing these results, panels generally concluded that learning multiple meanings of words was a skill area which needed additional work. It was recognized that students frequently have difficulty with these skills because in English the same word frequently has more than one meaning.

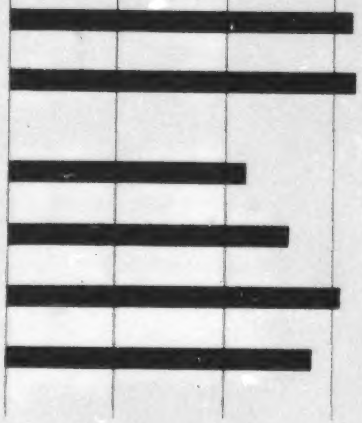
Comprehension Skills

Reading comprehension is a global term used to describe a composite of many separate skills, all of which contribute to a child's ability to acquire meaning from or learn ideas conveyed by the printed word. Specific skills within this domain include reading for detail, anticipating outcomes of passages, and following written directions. An example of a specific ability in this area is a child's reading a paragraph which presents a variety of events in the context of time, and later putting the events in the order in which they occurred.

Table 3 lists the six objectives selected for this domain.

In summary, reading specialists considered student performance less than desirable on five of the six objectives measured. The sixth objective could not be effectively interpreted because of flaws in the test questions. Review panels expressed particular concern about student performance in this domain, noting that skills in this area were especially needed in our complex society.

TABLE 3
STATE PERFORMANCE ON COMPREHENSION SKILLS

Objective	Percent Correct (0% 25% 50% 75% 100%)	Interpretation
Domain: Comprehension		
12—Answering Specific Questions About Reading Passages		• Performance was lower than expected and was less than satisfactory
13—Answering Who, What, When, Where, How Questions About Reading Passages		• Performance was lower than expected and was less than satisfactory
14—Arranging Events Chronologically		• Interpretation was not attempted due to flaws in test questions
15—Determining Logical Endings for Short Stories		• Performance was lower than expected and was less than satisfactory
16—Drawing Inferences from Reading Passages		• Performance was as expected, but was less than satisfactory
17—Summarizing Plots of Short Stories		• Performance was as expected, but was less than satisfactory

Application Skills

These skills utilize comprehension, and require gathering information, reasoning, using reference materials, and applying knowledge as well as understanding the materials used. An example of required ability in this domain is the student's deciding how to alphabetize several words all beginning with the letter "a".

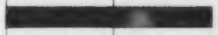
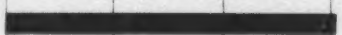
Another example is the student's ability to read written directions and then follow the correct route on a map. Table 4 identifies objectives selected for measurement in the area of application.

As with comprehension, reading specialists were concerned about the level of student performance on application objectives. On all but one of the objectives interpreted, student performance was less than desirable. Both the specialists and the general review panelists felt that application skills were especially important to students' success in critical subject areas such as math and social studies. It was also pointed out that application skills are frequently those associated with successful demonstration of "survival skills."

Summary

In conclusion, the 1974 assessment results show that students generally performed satisfactorily in the domains of word attack and vocabulary, but were not demonstrating satisfactory reading performance in the critical areas of comprehension and application. Since these latter areas are most important to success in future schooling, panel members felt that specific action should be taken throughout the state educational system to correct these deficiencies. Panel members recognized that, while acquisition of basic reading skills was important, of even more significance was whether students could use these skills to successfully cope with day-to-day living.

TABLE 4
STATE PERFORMANCE ON APPLICATION SKILLS

Objective	Percent Correct (0% 25% 50% 75% 100%)	Interpretation
Domain: Application		
18—Arranging Words in Alphabetical Order		• Performance was lower than expected and was less than satisfactory
19—Using Dictionary Skills		• Performance was lower than expected and was less than satisfactory
20—Interpreting Table of Contents		• Performance was as expected, but was less than satisfactory
21—Following Written Directions		• No interpretation was attempted due to flawed test questions
22—Following Map Directions		• Performance was lower than expected and was less than satisfactory
23—Solving Word Problems (Addition)		• Performance was lower than expected and was less than satisfactory
24—Solving Word Problems (Subtraction)		• Performance was lower than expected and was less than satisfactory
25—Selecting Correct Operations for Solving Word Problems		• Performance was lower than expected and was less than satisfactory

PERFORMANCE ON REPORTING VARIABLES

As explained earlier, a decision was made to collect data in nine categories which would be useful in analyzing and understanding actual student scores. This section explains what was included in each of these categories, shows how student performance related to each category, and provides interpretative comments.

Region

The "regions" included three geographical areas—Eastern, Western, and Metropolitan. Incorporation of this variable made possible comparisons of student performance among different areas within the state.

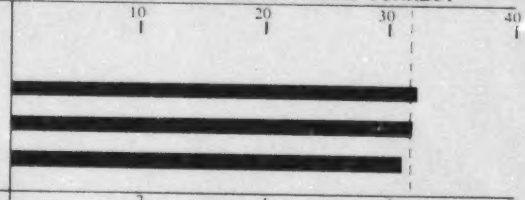
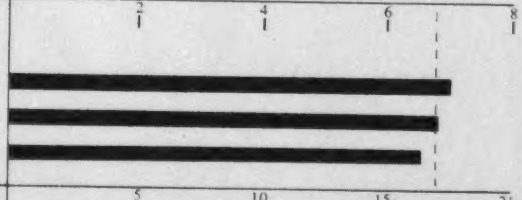
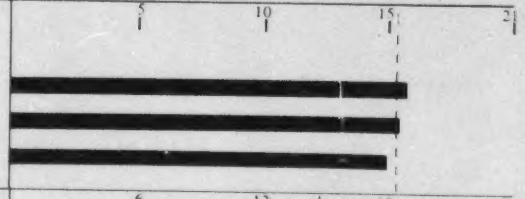
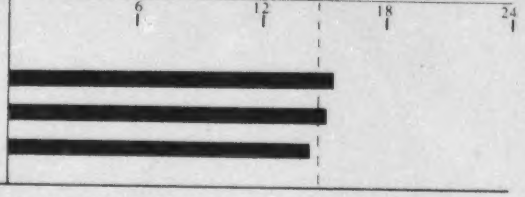
The Eastern region included the 18 counties east of the Cascade Mountains. The Metropolitan region included Clackamas, Multnomah and Washington counties; and the Western region included the counties west of the Cascades, other than those in the Metropolitan region. Figure 1 shows how the regions were divided.

Fig. 1. Oregon School Counties in Assessment Regions

Region	Counties
Eastern:	Baker
	Crook
	Deschutes
	Gilliam
	Grant
	Harney
	Hood River
	Jefferson
	Klamath Falls
	Lake
	Malheur
	Morrow
	Sherman
	Umatilla
	Union
	Wallowa
	Wasco
	Wheeler
Western:	Benton
	Clatsop
	Columbia
	Coos
	Curry
	Douglas
	Jackson
	Josephine
	Lane
	Lincoln
	Linn
	Marion
	Polk
	Tillamook
	Yamhill
Metropolitan:	Clackamas
	Multnomah
	Washington

TABLE 5

MEAN SCORES FOR DOMAINS BY STATE AND REGION

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND REGION	STATE AND SAMPLE SIZE	STATE AND REGION	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	4,108	Oregon	
	31.88	633	Eastern	
	31.39	1,967	Western	
	30.59	1,508	Metropolitan*	
Vocabulary Skills	6.84	4,108	Oregon	
	7.15	633	Eastern*	
	6.87	1,967	Western	
	6.66	1,508	Metropolitan*	
Comprehension Skills	15.20	4,108	Oregon	
	15.65	633	Eastern	
	15.38	1,967	Western	
	14.79	1,508	Metropolitan	
Application Skills	14.83	4,108	Oregon	
	15.45	633	Eastern	
	15.13	1,967	Western	
	14.18	1,508	Metropolitan*	

Note: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and Region means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and Region mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

Within each of these three areas, a sample was drawn proportionately representing the number of Oregon fourth graders enrolled in schools in each region. As noted in Figure 2, the majority of students were enrolled in the Western region.

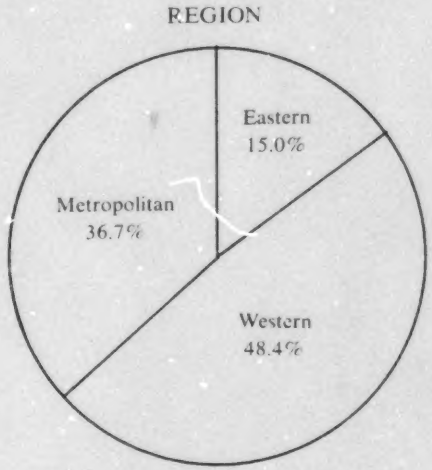


Fig. 2. Percent of children in Region categories

Table 5 shows how students in each region performed in each domain area. Specifically, it provides the following information:

- Column one gives the name of the performance domain
- Column two gives the average number of test items answered correctly in each domain for students throughout the state and within each region
- Column three gives the number of students in the state sample and in each region
- Column four identifies the region
- Column five provides a graph indicating the mean number of test items completed successfully by students in each region.

  It should be noted that column five is simply a visual representation of the statistical information in column three. In addition, interpretation is aided by noting that there were 40 test items for word attack, 8 items for vocabulary, 21 items for comprehension and 24 items for application.

Column five indicates that performance by the various regions was consistent throughout the four domains—that is, the Eastern region scored consistently higher (if only slightly) than the other regions, while the Metropolitan area scored lower than the state average in three of the four domains. Only in the area of word attack was the Metropolitan performance level not statistically different from that of the state.

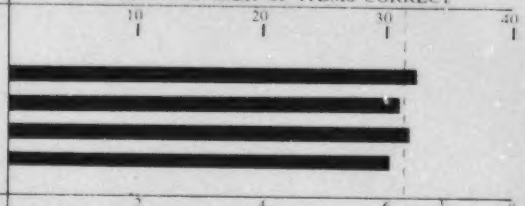
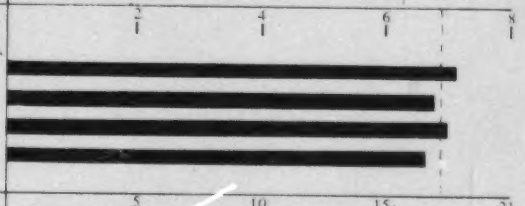
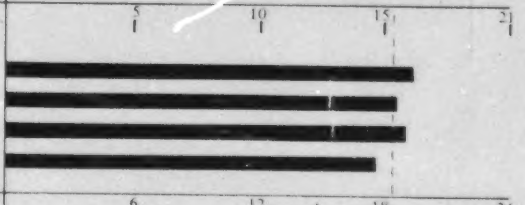
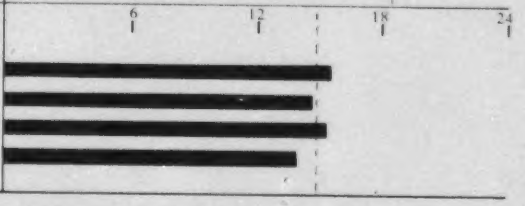
The review panels hypothesized that the relatively lower performance by the Metropolitan region might have been influenced by the significantly higher proportion of students from low-income families (as measured by the number of children enrolled in compensatory education programs under Title I of the Elementary and Secondary Education Act). Research has shown that socio-economic characteristics (such as family income) correlate with student academic performance. In order to test this idea, a separate analysis was performed in which the scores for all Title I children were eliminated from the results.

While the differences between the Metropolitan scores and the average scores for the state were reduced, this analysis still showed the students in the Metropolitan counties scoring statistically lower than the rest of the state in the areas of vocabulary and application. Additional details on this analysis are provided in Volume II of the Technical Report.

Panel reviewers cautioned against an over-reaction to the differences in scores obtained by the three regions. They noted that the slight variations were not educationally as important as the facts about state performance as a whole, nor as important as differences found on other reporting variables. Of special concern was the fact that students, on an average, performed correctly on only about 15 of the 21 test items chosen for measuring comprehension, and on only about 14 of the 24 test items within the domain of application.

TABLE 6

MEAN SCORES FOR DOMAINS BY STATE AND DISTRICT WEALTH

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND DISTRICT WEALTH	STATE AND SAMPLE SIZE	STATE AND DISTRICT WEALTH	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	4,108	Oregon	
	32.40	145	$25,000-$34,999	
	31.14	1,080	$35,000-$44,999	
	31.85	1,587	$45,000-$64,999*	
	30.13	1,296	$65,000+*	
Vocabulary Skills	6.84	4,108	Oregon	
	7.10	145	$25,000-$34,999*	
	6.78	1,080	$35,000-$44,999	
	7.01	1,587	$45,000-$64,999*	
	6.63	1,296	$65,000+*	
Comprehension Skills	15.20	4,108	Oregon	
	16.18	145	$25,000-$34,999	
	15.29	1,080	$35,000-$44,999	
	15.70	1,587	$45,000-$64,999*	
	14.35	1,296	$65,000+*	
Application Skills	14.83	4,108	Oregon	
	15.67	145	$25,000-$34,999	
	14.77	1,080	$35,000-$44,999	
	15.53	1,587	$45,000-$64,999*	
	13.83	1,296	$65,000+*	

NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and District Wealth means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and District Wealth mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

District Wealth

Another question of interest was whether student performance would be affected by the wealth of the district in which the student was enrolled. District wealth was defined as the district's assessed valuation of property (true cash value) divided by the district's per-pupil membership in residence. (Note that this definition of district wealth does not identify how much money is spent on education, but rather the average value of property in the district.) Within this variable, four classifications of wealth were established:

- $25,000 to $34,999
- $35,000 to $44,999
- $45,000 to $64,999
- $65,000 and above

Again, the sampling was designed to include an appropriate percentage of students within each category in order that a true picture of statewide enrollment of fourth graders might be obtained in terms of district wealth. Unfortunately, not enough students could be identified within the category of $25,000 to $34,999 to permit confidence in interpretation and recommendations. Only 145 pupils were identified for this category and it was felt, from a statistical standpoint, that at least 300 students should have been included. Figure 3 shows the percentage of students in the state within each category of district wealth.

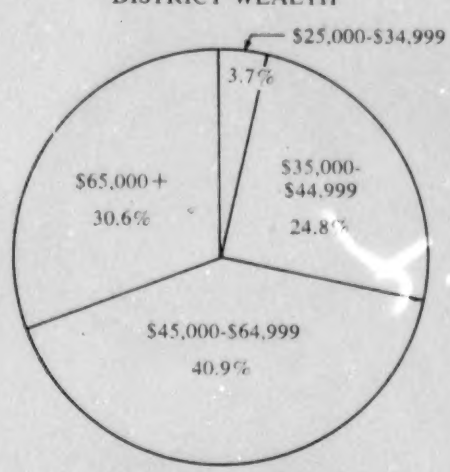


Fig. 3. Percent of children in District Wealth categories

Table 6 shows how students in each district wealth category performed within each of the four domains. The information in each of the five columns can be interpreted in the same manner as the regional information. The only change is that columns 2 and 4 read "District Wealth" rather than "Region."

Again, performance within various classifications was relatively consistent, with the wealthiest districts generally scoring below the state average. Interestingly, the second most wealthy district tended to score slightly above the state average.

In examining the characteristics of students in the wealthiest classification, it is important to note that this classification includes a much greater proportion of students enrolled in compensatory education programs under Title I of the Elementary and Secondary Education Act (children from low-income families). It could be concluded, therefore, that a substantial proportion of the tax base is derived from commercial rather than residential property. Using this information as an exclusive indicator of equality of educational opportunity seems unwarranted. Other information which was not available must also be considered. For instance, the willingness of taxpayers to increase their tax burden, and the degree to which available funds are distributed to schools enrolling students with the greatest educational need are also significant factors.

TABLE 7

MEAN SCORES FOR DOMAINS BY STATE AND DISTRICT SIZE

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND DISTRICT SIZE	STATE AND SAMPLE SIZE	STATE AND DISTRICT SIZE	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.47	4,108	Oregon	
	31.88	63	1-99	
	31.33	1,584	100-2,999	
	32.08	985	3,000-7,499*	
	30.44	1,476	7,500+*	
Vocabulary Skills	6.84	4,108	Oregon	
	7.13	63	1-99	
	6.93	1,584	100-2,999	
	6.97	985	3,000-7,499	
	6.65	1,476	7,500+*	
Comprehension Skills	15.20	4,108	Oregon	
	15.05	63	1-99	
	15.21	1,584	100-2,999	
	15.64	985	3,000-7,499	
	14.94	1,476	7,500+	
Application Skills	14.83	4,108	Oregon	
	15.90	63	1-99	
	14.84	1,584	100-2,999	
	15.56	985	3,000-7,499*	
	14.35	1,476	7,500+	

NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and District Size means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and District Size mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

District Size

The third district characteristic to be considered was size. This characteristic, along with region and district wealth was selected to ensure that the schools sampled for the assessment would be representative of the different locations and types of school districts throughout the state. This variable could also indicate whether student performance differed between large and small districts.

District size was defined as the total enrollment of all public schools in the district. Within this category four classifications of size were established:

- 1-99
- 100-2,999
- 3,000-7,499
- 7,500 and above

Figure 4 shows an estimated distribution of fourth graders among the four district size categories. Because there were only 63 pupils in the smallest sample category (1-99), meaningful interpretation was not possible with respect to that group.

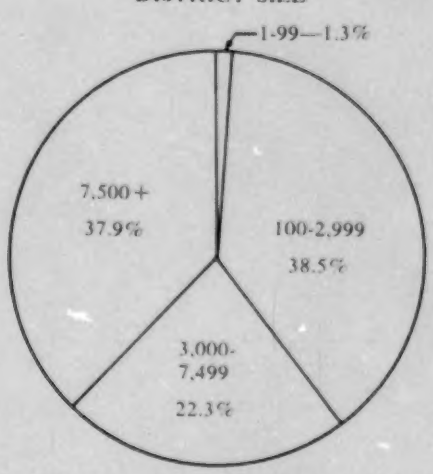


Fig. 4. Percent of children in District Size categories

Table 7 shows how students in districts of the four sizes performed in each of the domains. The information in each of the five columns can be interpreted in the same manner as the regional information. The only change is that columns 2 and 4 read "District Size" rather than "Region."

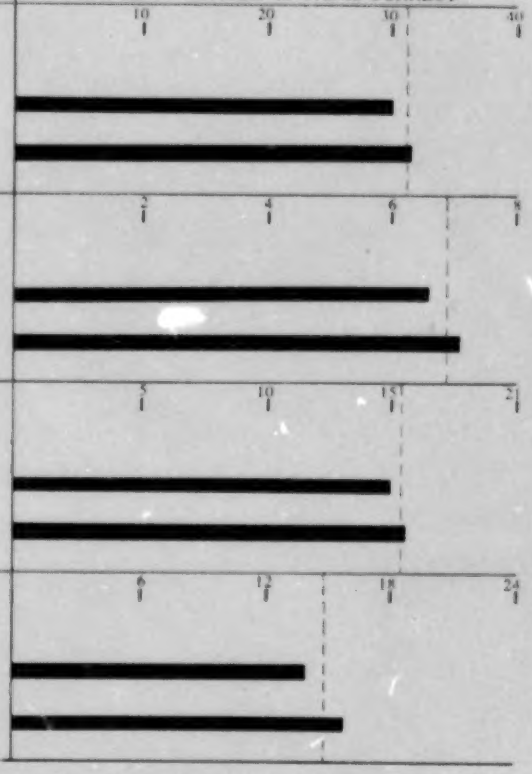
The largest districts scored lower than the state average on the word attack and vocabulary skill domains, while the next largest districts scored higher than the state average on word attack and application skill domains.

The slight but consistent trends for the Metropolitan, the wealthiest, and the largest districts to score lower are better understood after learning that these classifications have a substantial overlap in membership. That is, many of the Metropolitan school districts are also the largest and the wealthiest.

Although these trends are consistent, the differences in scores among the various categories of region and district wealth and district size were minor in terms of the actual number of test items. The review panel thought these differences were less important than differences noted in relation to student characteristics.

TABLE 8
MEAN SCORES FOR DOMAINS BY STATE AND SEX

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND SEX	STATE AND SAMPLE SIZE	STATE AND SEX	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	Oregon	4,108	
	30.38	Male*	2,091	
	31.98	Female*	2,017	
Vocabulary Skills	6.84	Oregon	4,108	
	6.59	Male*	2,091	
	7.09	Female*	2,017	
Comprehension Skills	15.29	Oregon	4,108	
	14.47	Male*	2,091	
	15.95	Female*	2,017	
Application Skills	14.83	Oregon	4,108	
	13.91	Male*	2,091	
	15.77	Female*	2,017	



NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and Sex means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and Sex mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

Sex

The children in the reading assessment were asked to state their sex on the examination, so that the question of whether boys or girls read better could subsequently be considered. Because of the present interest in sex bias in curriculum materials, the differences in reading achievement between boys and girls has particular relevancy.

One would anticipate that fourth graders would be about evenly divided between boys and girls. The estimate for the population supports this expectancy. Figure 5 shows the percentages of pupils who were male and female.

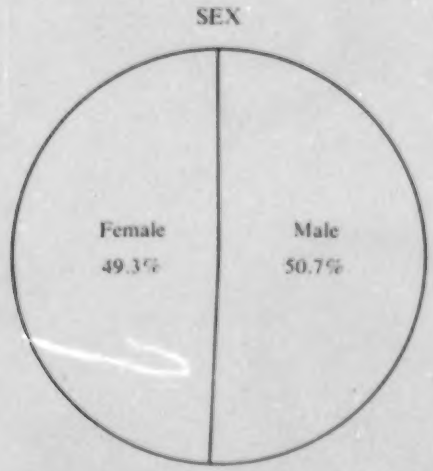


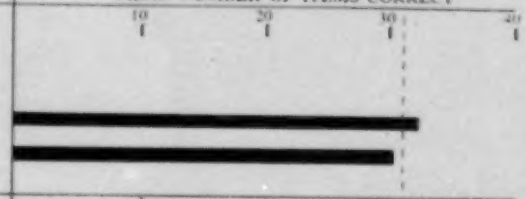
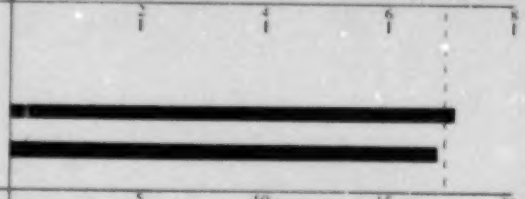
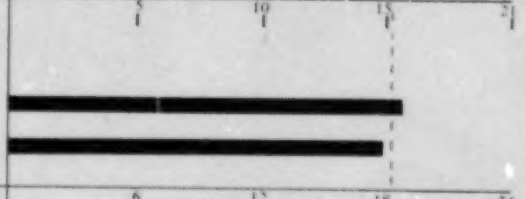
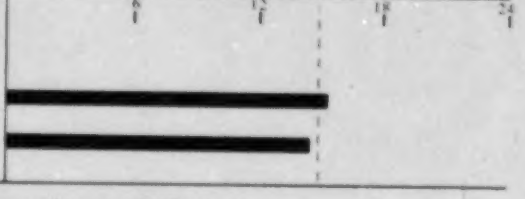
Fig. 5. Percent of children in Sex categories

Table 8 shows levels of performance for boys and girls in the four domains. The information in each of the columns is the same as that described in the similar table for region. The only change is that columns 2 and 4 read "Sex" instead of "Region."

On all domains, boys scored lower than girls, even on stories about fighting and sports cars—topics generally considered more popular with boys. However, boys equalled girls on questions which required following map directions or choosing correct mathematical operations to solve story problems.

TABLE 9

MEAN SCORES FOR DOMAINS BY STATE AND AGE

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND AGE	STATE AND SAMPLE SIZE	STATE AND AGE	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	4,108	Oregon	
	31.94	1,686	Less than 10*	
	30.63	2,422	10 or Older*	
Vocabulary Skills	6.84	4,108	Oregon	
	7.02	1,686	Less than 10*	
	6.71	2,422	10 or Older*	
Comprehension Skills	15.20	4,108	Oregon	
	15.72	1,686	Less than 10*	
	14.84	2,422	10 or Older*	
Application Skills	14.83	4,108	Oregon	
	15.43	1,686	Less than 10*	
	14.40	2,422	10 or Older*	

NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and Age means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and Age mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

Age

Children participating in reading assessments were asked to state how old they were to determine whether age could be a factor in identifying children who are having reading difficulties. Because most children were either nine or ten years old, two categories were formed:

- Less than 10
- 10 or Older

Figure 6 shows that there were more pupils 10 and older than pupils under 10. The 10 and older group included pupils whose birthdays came between November 16 and April 24; pupils who had been retained in a grade; and those who had started school later than the other children.

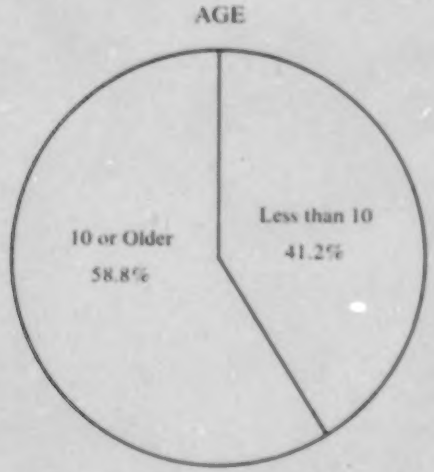


Fig. 6. Percent of children in Age categories

Table 9 shows the performance of the two age groups. The information in each of the five columns is the same as that described in the regional table. The only change is that columns 2 and 4 read "Age" rather than "Region."

On all the domains fourth graders younger than 10 scored higher than those 10 and older. On one objective, requiring students to identify the appropriate operation for solving mathematical word problems, performance was equal for the two age groups.

On this assessment, more boys than girls were older, so the two characteristics may identify many of the same children with reading problems—that is, older boys. This finding can be a valuable aide to teachers in identifying children with potential reading problems.

TABLE 10

MEAN SCORES FOR DOMAINS BY STATE AND RACE

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND RACE	STATE AND SAMPLE SIZE	STATE AND RACE	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	4,108	Oregon	
	31.33	3,899	White*	
	28.02	202	Non-White*	
Vocabulary Skills	6.84	4,108	Oregon	
	6.88	3,899	White*	
	6.01	202	Non-White*	
Comprehension Skills	15.20	4,108	Oregon	
	15.31	3,899	White*	
	13.19	202	Non-White*	
Application Skills	14.83	4,108	Oregon	
	14.92	3,899	White*	
	12.87	202	Non-White*	

NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and Race means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and Race mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

Because 7 children in the sample were not classified by Race, the sample size for Race does not equal the sample size for the state.

Race

The test administrator was asked to identify whether children participating in the assessment were American Indian, Negro, Oriental Asian, Spanish surname, American, and White or other. Because it was known prior to the assessment that approximately five percent of the state's population of children in grades kindergarten through 12 were non-White pupils, a comparison of known state characteristics with the assessment estimate was used to check the accuracy of assessment sampling procedures.

Figure 7 shows that 4.9 percent of the fourth graders in the sample were non-White, a very close estimate of the known percentage. For this reporting variable, only the two categories of White and non-White were formed. The sample sizes of other racial and ethnic groups were not large enough to permit confidence in more definitive interpretation. Racial and ethnic information was needed to determine whether the state was meeting the educational needs of all children. With the rising public awareness of cultural differences, the state has begun programs to reach American Indians, bilingual bicultural, and Black children.

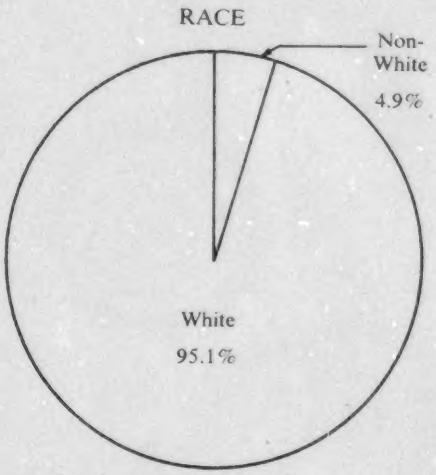


Fig. 7. Percent of children in Race categories

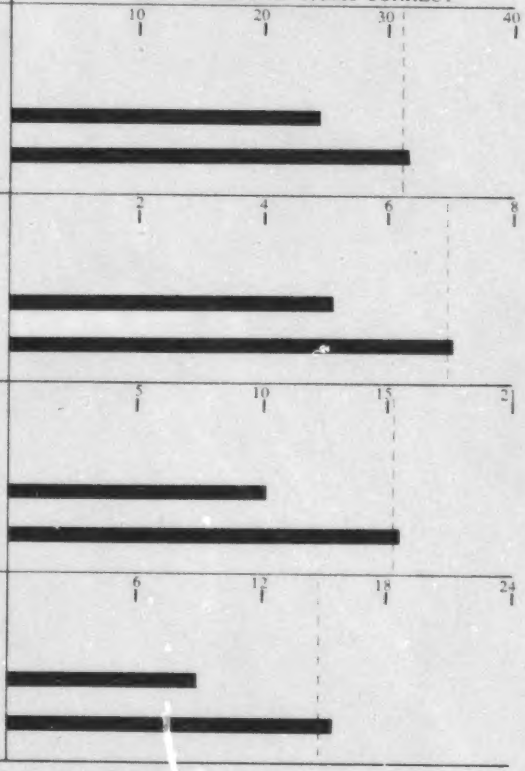
Table 10 shows the performance of White and non-White children in the four domains. In all four domains, non-White children had lower scores, although on two objectives, performance for each group was equivalent to the state average. These two objectives concerned mathematical word problems. One required solving the problem using addition; the other required selecting the correct operation from the choices of addition, subtraction, multiplication or division.

Review panel members had difficulty interpreting the differences in performance between White and non-White children, since the non-White group was so diverse in its makeup. They suggested that future assessments should provide more complete data on each of the minority populations.

TABLE 11

MEAN SCORES FOR DOMAINS BY STATE AND FEDERAL ASSISTANCE

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND FEDERAL ASSISTANCE	STATE AND SAMPLE SIZE	STATE AND FEDERAL ASSISTANCE	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	4,108	Oregon	
	24.28	279	Title I*	
	31.70	3,747	Non-Title I*	
Vocabulary Skills	6.84	4,108	Oregon	
	5.11	297	Title I*	
	6.97	3,747	Non-Title I*	
Comprehension Skills	15.20	4,108	Oregon	
	10.03	297	Title I*	
	15.60	3,747	Non-Title I*	
Application Skills	14.83	4,108	Oregon	
	8.83	297	Title I*	
	15.28	3,747	Non-Title I*	



NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and Federal Assistance means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and Federal Assistance mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

Because 82 children in the sample were not classified by Federal Assistance, the sample size for Federal Assistance does not equal the sample size for the State.

Title I Participants

A large program in the Oregon Department of Education is the management of federally funded Title I projects. Such programs are designed to expand and improve educational opportunities for educationally disadvantaged children, most of whom are from low-income families. Last year there were projects in such areas as pre-school instruction, mathematics, language arts, cultural enrichment and reading. The question of whether a child was participating in a Title I project was asked to determine whether children who need assistance are receiving it.

Figure 8 shows that about 6.7 percent of the fourth graders, or 2,382 children, were Title I participants.

To participate in a Title I project, children must have been shown to need special attention in some area of educational concern.

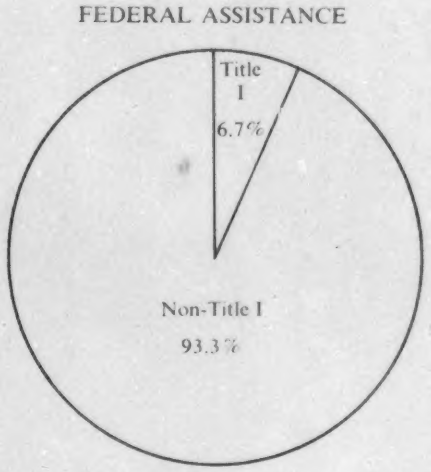


Fig. 8 Percent of children in Federal Assistance categories

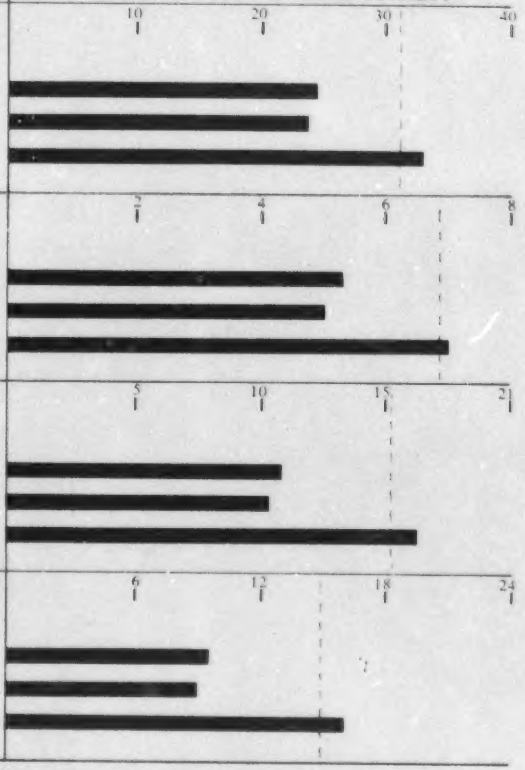
Table 11 shows the performance of Title I and non-Title I children. The information in each of the five columns is the same as that described in the similar table for region. The only change is that columns 2 and 4 read "Federal Assistance" rather than "Reg on."

This table shows that these children have lower scores than the state average in all domains. This would be expected if the children had been correctly placed. The information in column 5 reflects the differences between state performance and Title I and non-Title I students.

TABLE 12

MEAN SCORES FOR DOMAINS BY STATE AND CORRECTIVE/REMEDIAL WORK DIAGNOSED

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND CORR/REM WORK DIAG.	STATE AND SAMPLE SIZE	STATE AND CORRECTIVE/ REMEDIAL WORK DIAGNOSED	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	4,108	Oregon	
	24.88	339	Diagnosed by Teacher*	
	23.54	369	Diagnosed by Other*	
	32.68	3,354	Not Diagnosed*	
Vocabulary Skills	6.84	4,108	Oregon	
	5.37	339	Diagnosed by Teacher*	
	4.96	369	Diagnosed by Other*	
	7.20	3,354	Not Diagnosed*	
Comprehension Skills	15.20	4,108	Oregon	
	10.70	339	Diagnosed by Teacher*	
	10.25	369	Diagnosed by Other*	
	16.24	3,354	Not Diagnosed*	
Application Skills	14.83	4,108	Oregon	
	9.63	339	Diagnosed by Teacher*	
	8.97	369	Diagnosed by Other*	
	16.02	3,354	Not Diagnosed*	



NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and Corrective/Remedial Work Diagnosed means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and Corrective/Remedial Work Diagnosed mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

Because 46 children in the sample were not classified by Corr/Rem Work Diag., the sample size for Corr/Rem Work Diag. does not equal the sample size for the state.

Diagnosed as Needing Corrective or Remedial Work in Reading

Beginning in first grade with a child's first attempts at reading, and continuing through second, third and fourth grades, the teacher observes a child's reading progress. At any point, the teacher may decide that a child needs special help to succeed in mastering reading skills. Often, if qualified specialists are available, the teacher may ask a specialist to judge the nature and severity of a child's reading difficulty.

Teachers were asked to indicate which children they, or a reading specialist, had diagnosed as needing corrective or remedial work in reading. This information revealed how many children throughout the state needed help, and what districts they resided in. It also provided a basis for future projections as to whether children experiencing reading problems were more likely to be boys or girls, younger or older.

Figure 9 shows that 17.3 percent of fourth graders have been diagnosed either by their teacher or by a specialist as needing help in reading; about half of these children were diagnosed by a teacher.

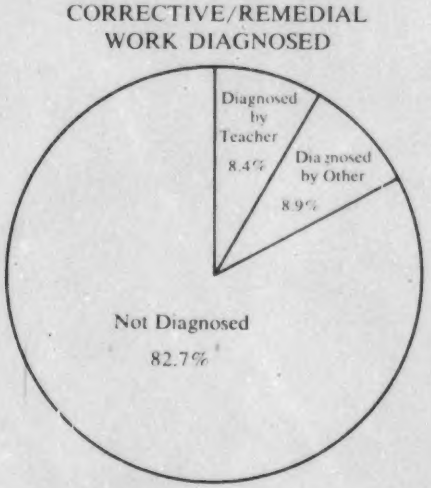


Fig. 9. Percent of children in Corr/Rem Work Diagnosed categories

Table 12 shows the performance of the three groups of children in the four domains. The information in each of the five columns is the same as that described in the similar table for region. The only change is that columns 2 and 4 read "Corrective/Remedial Work Diagnosed" rather than "Region."

On all objectives and domains, children diagnosed as needing help —by a teacher or by someone else—scored lower than those children who had not been so diagnosed.

Review panel members felt confident that children who were in need had been identified. They also noted that those children diagnosed as needing corrective or remedial reading help were more likely to be older children, boys, minorities, and Title I participants. This information can be helpful in making early diagnoses of children who are likely to develop reading problems. Needed individual attention may then be provided to reduce the likelihood that problems will develop, or to reduce the severity of those which exist.

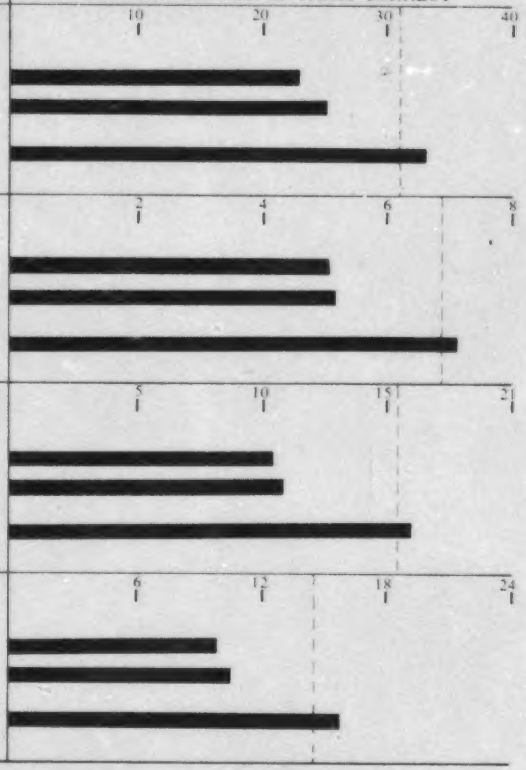
Because almost half of the diagnostic work was performed by teachers, it is likely that additional expertise in diagnosing reading problems is needed. University teacher education faculty, Department of Education personnel, and local school teachers will want to provide opportunities to strengthen skills in the diagnosis of reading problems.

Finally, this information is useful in curriculum development research. Once groups requiring assistance are identified, it becomes easier to design curricula which will meet their needs.

TABLE 13

MEAN SCORES FOR DOMAINS BY STATE AND CORR./REM. WORK NEED VS. RECEIVED

DOMAIN AREA	DOMAIN MEAN SCORE FOR STATE AND CORR/REM NEED V. REC	STATE AND SAMPLE SIZE	STATE AND CORRECTIVE/ REMEDIAL WORK NEED VS. REC.	MEAN NUMBER OF ITEMS CORRECT
Word Attack Skills	31.17	4,108	Oregon	
	23.87	539	Needs & Receives*	
	25.28	162	Needs & Not Receives*	
	32.75	3,301	Not Diagnosed & Not Received*	
Vocabulary Skills	6.84	4,108	Oregon	
	5.11	539	Needs & Receives*	
	5.32	162	Needs & Not Receives*	
	7.22	3,301	Not Diagnosed & Not Received*	
Comprehension Skills	15.20	4,108	Oregon	
	10.30	539	Needs & Receives*	
	10.98	162	Needs & Not Receives*	
	16.27	3,301	Not Diagnosed & Not Received*	
Application Skills	14.83	4,108	Oregon	
	8.98	539	Needs & Receives*	
	10.35	162	Needs & Not Receives*	
	16.07	3,301	Not Diagnosed & Not Received*	



NOTE: For each domain, the broken vertical line in column five indicates the State mean score. Differences between the State mean and Corr/Rem Work Needed vs. Received means can be noted by observing how much the bars deviate from the vertical line.

*Indicates that the difference between the State mean (average) score and Corr/Rem Work Needed vs. Received mean scores for the domain is probably (95 out of 100 times) a true difference and not due to a random set of fluctuations.

Because 106 children in the sample were not classified by Corr/Rem Work Needed vs Rec., the sample size for Corr/Rem Work Needed vs Rec. does not equal the sample size for the state.

Corrective Remedial Work Needed vs. Received

The previous reporting variable covered children who had been diagnosed as needing reading help. The next question that many of the people shaping the assessment plan wanted answered was, "How many of those children are receiving the help they need?" To address this question, three additional reporting classifications were developed:

- Children who had been diagnosed and were receiving help
- Children who had been diagnosed but were not receiving help
- Children who had not been diagnosed and were not receiving help

Figure 10 shows that 13.3 percent of the fourth graders had been diagnosed as needing help and were receiving it; and that 4.1 percent, or approximately 1,400 fourth graders, had been diagnosed as needing help but were not receiving it. These children, according to assessment information, are more likely to be from the Western region.

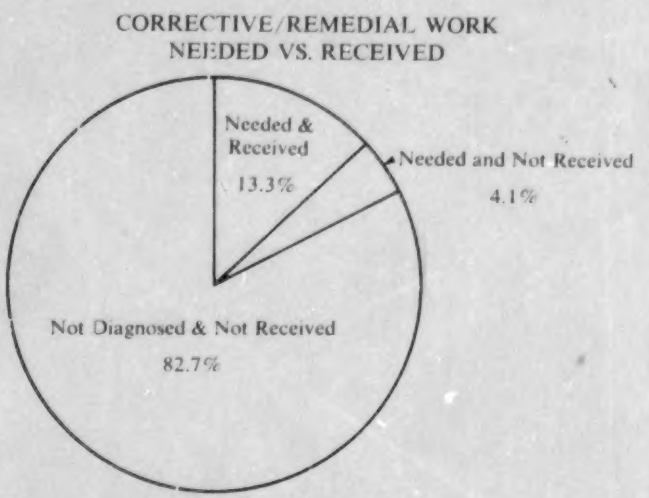


Fig. 10. Percent of children in Corr/Rem Work Needed vs. Received categories

Table 13 shows the performance of children in these three categories. The information in each of the five columns is the same as that described in the similar table for region. The only change is that columns 2 and 4 read "Corrective/Remedial Work Needed vs. Received" rather than "Region."

As noted in Table 12, children diagnosed as needing remedial assistance, scored lower on all objectives than children not diagnosed. In addition, Table 13 shows that of those children diagnosed as needing remedial assistance, those receiving assistance scored lower on all objectives than those not receiving it. The review panels noted that this does not imply that Oregon's remedial programs have not been successful. It is not known how long these children have been in a remedial program or whether their scores would have been even lower had they not been receiving remedial help. The lower scores do imply that those children most in need of help are participating in a program intended to provide it.

Summary

The general performance of fourth grade students across the state was good, though not excellent. Performance was better in some areas than in others.

- The performance of fourth grade pupils across the state was lower for comprehension and application skills than for word attack and vocabulary skills. Reading specialists on the review panels reported that these findings were not surprising, because primary grade instruction generally stresses recognition of letter sounds and words more than comprehension and interpretation. But they felt, nevertheless, that beginning in the first grade, children should have practice making inferences, summarizing the main plot of a story, placing events in chronological order, and otherwise learning to critically examine reading content. The reading specialists also thought children should be provided more opportunities to practice reading skills associated with all learning activities.
- The relative performance of the reporting groups was quite consistent throughout the four domains. Although there was a consistent trend towards lower scores within the large, wealthy, and Metropolitan districts, the differences among types of district were relatively minor in terms of numbers of test items answered correctly. Review panel members did not think the differences were particularly noteworthy in light of the greater differences in performance observed in relation to student characteristics.
- The student characteristics of sex and age also showed a slight but consistent trend across the domains with boys and older children scoring lower. On this assessment, more boys than girls were older, so the two characteristics may identify many of the same children with reading problems. That is, older boys may have reading problems. This finding may be a valuable aid to teachers in predicting reading difficulties.
- The five percent of the fourth grade children who were non-White scored lower on the assessment than the White children. These children were also more likely to be in ESEA Title I programs, and to be receiving corrective or remedial assistance in reading.
- The most significant differences in performance between the state average and the averages for different grouping of students were found within these categories: (1) children participating in ESEA Title I Compensatory Education Programs; and (2) children diagnosed as needing corrective or remedial work. Low scores in these groups would be expected if, indeed, the children had been correctly placed, because these programs were designed to help the most needy. Panel members emphasized, however, that low scores by these children do not imply that the Federal Assistance or corrective reading programs have not been successful. In fact, the assessment information points toward a need to continue and reinforce remedial and corrective reading programs.

SECTION IV: RECOMMENDATIONS

The primary purpose of assessment is to produce data which can be used in decision-making. In planning its assessment effort, Oregon found that most other states concluded assessment activities with dissemination of data to the public, depending on others to then generate appropriate recommendations and decisions. Frequently, this procedure produced no action. To circumvent this problem, the Oregon assessment staff turned to volunteers throughout the state—teachers, reading specialists, school administrators and board members, parents and citizens—to review the assessment data, interpret its significance, and make specific suggestions about what should be done next. Results of that procedure follow.

- Recommendations to the Classroom, School and District Levels:

  1. A special effort should be made to include content material which is interesting to male, non-white, Title I, or remedial children if such children are present in the classroom.

  2. Teachers, and district and IED personnel should review the textbooks and other reading materials to ensure that content areas which are considered important, but which the assessment reveals are poorly learned by fourth graders, are included.

- Recommendations to the Oregon Department of Education and State Board of Education:

  3. Experimental studies should be conducted to identify the types of remedial activities which work best, and determine why they are effective. (Would involve action by classroom, school and district personnel.)

  4. Experimental studies should also be conducted to attempt to equalize differences by sex and age. Some areas of investigation might include such variables as: (a) placement in class by sex, or age, or both; (b) curriculum modifications; (c) promotion of students to new grades; and (d) the number of male elementary teachers.

  5. A standard form should be developed and centrally stored to provide academic information about transferring students. (Would involve action by the State Legislature and school district personnel.)

  6. Teacher inservice workshops should be conducted on interpretation of test results (stressing both student strengths and weaknesses) and implementation of appropriate instructional procedures. (Would involve action by school and district personnel.)

  7. A literature search should be made to identify effective educational programs for minorities.

  8. The State Textbook Commission should commit funds to the evaluation of textbooks incorporating the results of the statewide assessment. Textbooks adopted for use would be required to include content on those skills identified by the assessment as weak.

- Recommendations to the Legislature:

  9. Grant funds to provide services to the approximately four percent of Oregon students who have been diagnosed as needing remedial/corrective help but who are not receiving it.

  10. Make resources available for academic diagnosis of all students transferring into one system from another.

  11. Provide seed money for innovative programs to increase parents' involvement in the education of their children.

- Recommendations to Parents and the Public:

  12. Parents should encourage and provide the model for a variety of reading activities, particularly with boys, emphasizing Application Skills.

  13. Parents should be made aware that they are "educators," too. (Teachers and other professional "educators" must also accept this idea.)

In addition, the State Advisory Committee on Assessment was encouraged to recommend policies or procedures which could improve future assessment efforts. Their recommendations include:

1. That the Legislature should increase state funding support from 20 to 75 percent of the assessment cost. In addition, the budget for 1975-77 should be increased to allow planning and pilot testing of new subject areas to be carried on concurrently with an assessment in one area. State funding would provide more assurance of continued funds which in turn would help assure implementation of long-range plans.

2. The compressed time schedule for development of the 1973-74 reading assessment necessitated adopting, and in some cases modifying, already available objectives and test items, and presenting them to the IED's for selection of those considered most important for Oregon fourth graders. Because Oregon educators are rapidly expanding their own set of objectives and test items, a larger pool of Oregon-developed resources will be available. This will strengthen future assessments. Also, more time should be allowed for local consideration of assessment objectives.
3. The 1973-74 assessment involved the cooperation and contributions of many Oregon citizens and educators. From the first stages of planning, various advisory committees and IED coordinators have initiated or approved each major decision. Through them, many other people have contributed to the assessment. It is a healthy sign that a program that affects so many people in Oregon should request and incorporate their ideas. Future assessments should continue to solicit ideas from Oregonians of all walks of life.
4. To maintain interest and involvement in the assessment program, continuous communication with the participants is desirable. It is particularly important to keep teachers informed because ultimately, if the assessment results are to have impact on improving education, change must occur within the classroom. Plans for the 1974-75 assessment include increased communication between assessment staff and classroom teachers.
5. In 1973-74, fourth grade performance was reported in terms of three district and six pupil variables. This system greatly helped in interpreting test results. Attention to variables meant that questions about the types of children who need special attention in reading and where they are located could be addressed more precisely.

The results of the 1973-74 assessment and requests by various assessment audiences suggest that more discussion is necessary before reporting variables are chosen for future assessments. The major considerations should be:

- What information do state-level decision makers need?
- What information can be used to improve educational opportunities?
- What information is obtainable at a reasonable expenditure of money and cooperation?

PROPOSED LEGISLATION

Some of the recommendations from the review panels and the State Advisory Committee have already resulted in action. The State Board of Education has adopted a 1975 legislative program which has several implications for the statewide assessment program.

First, recommendations call on the Legislature to appropriate more general fund dollars for state assessment activities and to reduce current dependence on federal funds.

Second, the Board has requested an appropriation of grant-in-aid funds to reimburse Intermediate Education Districts for expenses incurred while assisting the state assessment program.

Third, the Board's policy and budget recommendations relate closely to many suggestions for corrective action made by various review panels on the basis of the assessment results. These suggestions include:

- Expanding the early childhood education programs first initiated as an experimental pilot project by the 1973 Legislature. The recommended expansion would allow all Oregon districts to employ individuals, concentrate on diagnosing individual student problems (including those of children entering the first grade and children transferring between districts) and on providing instructional and counseling services aimed at improving basic skill performance;
- Appropriating special grants-in-aid to launch increased educational programs for disadvantaged, Indian and bilingual children throughout Oregon;
- Improving instructional services for handicapped children, including those of school age, not now served by Oregon schools;
- Providing grants-in-aid to allow Intermediate Education Districts to contract for special services not readily available to schools in their locale. One purpose of this program would be to provide funding to enable IED's to employ regional reading specialists.

REPORTS AND PRODUCTS

The following reports and products contain the results of the 1973-74 Oregon Statewide Assessment Program:

The *Technical Report* contains in three volumes the history, philosophy, description, procedures, results and recommendations of the 1973-74 reading assessment. This report was prepared as a comprehensive record for the assessment staff and educational researchers.

The *General Report* is a summary of the *Technical Report*, intended for such audiences as legislators, Department of Education program directors and staff, local district personnel, the general public, and media personnel who would further disseminate the information.

The *Executive Summary*, like the *General Report*, is for a non-technical audience. The most significant findings and recommendations are highlighted in this document.

The *Brochure* is a one-sheet foldout providing an overview of the 1973-74 Oregon assessment program.

Press Releases publicizing the 1973-74 Oregon Statewide Assessment Program and its results were prepared for publication in major newspapers throughout the state. These press releases summarize the most noteworthy outcomes of the assessment effort.

A short *Slide Tape Presentation* provides an overview of the Oregon assessment program and is directed to educators, legislative audiences and the public.

The *Audiovisual Presentation* is a short news film clip prepared for television. This presentation highlights results of the 1973-74 Oregon assessment effort and is directed toward the public.

Copies of the *General Report* and *Executive Summary* are available. Write or call:

Documents Clerk
Oregon Department of Education
942 Lancaster Drive NE
Salem, Oregon 97310

Phone: 378-3589

Questions about the Oregon Statewide Assessment Program are welcomed and should be sent to:

Director
Statewide Assessment Program
Oregon Department of Education
942 Lancaster Drive NE
Salem, Oregon 97310

APPENDIX A

Advisory Groups for the Oregon Statewide Assessment Program

STATEWIDE ASSESSMENT ADVISORY COMMITTEE

William Kendrick (Chairman)
Superintendent
Salem School District #24J

Jack D. Ripper (Vice-Chairman)
State Senator, District #24
North Bend, Oregon

Gerry P. Crockwell
Insurance Executive
Portland, Oregon

Mary Dannen, President
Oregon Congress of Parents and Teachers
Halsey, Oregon

Carl Jorgensen, Principal
Sam Case Elementary School
Newport, Oregon

Miriam McClure
Administrative Assistant
Human Resources Bureau
Portland, Oregon

Clifford Murray, Chairman
Grants Pass School Board
Grants Pass, Oregon

Mary Rieke
State Representative, District #9
Portland, Oregon

Rick Roemer
OCE Student
Sublimity, Oregon

William Stewart
Dean of Community Education
Mount Hood Community College Center
Portland, Oregon

Clyde Swisher, Teacher
Nyssa Public Schools
Nyssa, Oregon

Alice Tillman, Teacher
Glenfair Elementary School
Portland, Oregon

Diane Weinstein, Teacher
Whitaker Middle School
Portland, Oregon

STATEWIDE ASSESSMENT IED COORDINATORS 1974-1975

Robert O. Eddy, Superintendent
Baker County IED

Mr. Robert Holman, Coordinator
Guidance & Testing
Linn-Benton IED

Dr. Marie Hopke, Curriculum Specialist
Clackamas IED

Mr. George E. Long, Director
General Education
Clatsop IED

Ray K. Godsey, Superintendent
Columbia IED

Mr. Robert Salisbury, Director
Pupil Personnel
Coos Bay School District #9
Coos Bay IED

Dr. Elvin T. Williams
Superintendent-Clerk
Courthouse
Crook IED

Mr. Donald C. Brent, Director
Child Services & Special Education
Curry IED

Dr. Wyatt I. Rosenbaum, Superintendent
Bend School District #1
Deschutes IED

Mr. Don Schutt, Director
Teacher Inservice & Curriculum
Douglas IED

Gordon V. Ruff, Superintendent
Gilliam & Wheeler IED

Mr. Robert A. Batty, Superintendent
Grant IED

Dr. Mary Howden, Consultant
Special Education
Harney IED

Dr. Frank T. Lariza, Superintendent
Hood River School District #1
Hood River IED

Mr. Ralph Humphrey, Director
Instructional Programs
Jackson IED

Mr. George Bowers, Superintendent
Jefferson IED

Robert Hambly
Curriculum Director
Josephine IED

Charles Steber, Asst. Superintendent
Klamath County School District
Klamath IED

Mr. Stanley Wonderly
Curriculum Coordinator
Lake IED

Mr. Jim Swanson, Specialist
Measurement and Research
Lane IED

Mr. Rex Krabbe, Project Specialist
Lincoln County Unit
Lincoln IED

Mr. Robert L. Harrod, Supervisor
Malheur IED

Mrs. Hazel Sydow, Consultant
Testing & Curriculum
Marion IED

Mrs. Vi Lenham
Heppner High School
Morrow IED

Mr. Peter Wolmut, Director
Research & Evaluation
Multnomah IED

Mr. Elton Fishback, Superintendent
Polk IED

Mr. Lynn O. Hampton, Superintendent
Sherman IED

Mr. Lee Roy Hanson, Superintendent
Tillamook IED

Dr. Michael Wsiaki
Umatilla County IED

Mr. Bob French, Testing Coordinator
Union IED

A. H. Haberly, Superintendent
Wallowa IED

Chuck Jackson, Curriculum Coordinator
Wasco IED

Mr. George Anderson, Director
Measurement I
Washington IED

Dr. Ed Katz
Yamhill IED

RIGHT-TO-READ SUBCOMMITTEE from the OREGON STATE BOARD OF EDUCATION RIGHT-TO-READ ADVISORY COMMITTEE

Dr. Neil McDowell
Oregon Reading Association

Mrs. Reita Hribernick
Oregon Community College Association

Mrs. Roba Rathkey
Oregon School Boards Association

Mr. Daniel R. Bohlmann
Graduate Student, Northwestern School of Law

STATEWIDE ASSESSMENT PARENTS AND EDUCATORS REVIEW PANELS
August 22-29, 1974

Mrs. Mary Abraham, Parent
Albany, Oregon

Mr. Jim Allen, Parent
Beaverton, Oregon

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Arthur D. Hay Elementary School
Lakeview, Oregon

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Mr. Verne R. Buhler, Principal
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Troutdale Elementary School
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STATEWIDE ASSESSMENT
OREGON DEPARTMENT OF
EDUCATION
REVIEW PANEL
September 20, 1974

Dr. Les Adkins
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Mr. Jack Beck
Specialist
Exemplary Programs

Mr. Maurice Burchfield
Director
Basic Education

Ms. Sharon Case
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Mr. Robert Clark
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OREGON BOARD OF EDUCATION GOALS FOR ELEMENTARY AND SECONDARY EDUCATION

PREAMBLE

The Oregon Board of Education, in response to the changing needs of Oregon learners, sets forth six goals for the public schools.

Conceived and endorsed by Oregon citizens, these statewide goals confirm that every student in the elementary and secondary schools shall have the opportunity to learn to function effectively in six life roles: LEARNER, INDIVIDUAL, PRODUCER, CITIZEN, CONSUMER, and FAMILY MEMBER. Each goal states the knowledge, skills, and attitudes needed to function in these life roles.

The statewide goals shall be implemented through the program and course goals of each local school district. These local goals are set by the schools together with their communities to fulfill a shared responsibility for the education of every student. Because most of the knowledge and skills needed to function effectively in the role of LEARNER are acquired in school, the school has primary responsibility for helping students achieve this goal.

Each school and its community establishes priorities among the goals to meet local needs, and allocates school and community resources accordingly. This assures each student the opportunity to achieve the requirements for graduation from high school, and as much additional schooling as school and community resources can provide.

STATEWIDE GOALS FOR SCHOOLING

Each individual will have the opportunity to develop to the best of his or her ability the knowledge, skills, and attitudes necessary to function in each life role.

1. In preparation for the role of LEARNER:
   Each individual will develop the basic skills of reading, writing, computation, spelling, speaking, listening, and problem-solving; and will develop a positive attitude toward learning as a lifelong endeavor.
2. In preparation for the role of INDIVIDUAL:
   Each learner will develop the skills to achieve fulfillment as a self-directed person; acquire the knowledge to achieve and maintain physical and mental health; and develop the capacity to cope with change through an understanding of the arts, humanities, scientific processes, and the principles involved in making moral and ethical choices.
3. In preparation for the role of PRODUCER:
   Each individual will learn of the variety of occupations; will learn to appreciate the dignity and value of work and the mutual responsibilities of employers and employees; and will learn to identify personal talents and interests, make appropriate career choices, and develop career skills.
4. In preparation for the role of CITIZEN:
   Each individual will learn to act in a responsible manner; will learn of the rights and responsibilities of citizens of the community, state, nation, and world; and will learn to understand, respect, and interact with other cultures, generations and races.
5. In preparation for the role of CONSUMER:
   Each individual will acquire knowledge and develop skills in the management of personal resources to provide wisely for personal and family needs and meet obligations to self, family, and society.
6. In preparation for the role of FAMILY MEMBER:
   Each individual will learn of the rights and responsibilities of family members, and acquire the skills and knowledge to strengthen and enjoy family life.

"It is our intent that these goals will be the driving force behind all elementary-secondary school curriculum revision and development throughout the coming decade."—Jesse Fasold, Superintendent of Public Instruction—1974.

APPENDIX C

Interpretation Guide
for
Schools Participating In
The 1973-74 Oregon Statewide Assessment Program

For those schools that participated in the April 1974 statewide assessment, Table 1 in Appendix C offers a comparison between their mean scores on each objective and skill area (domain), and the performances of children throughout the state or in different types of school districts. The mean performance on an objective or a skill area for students in a given school can be compared to statewide performance or to the performance of students in similar districts. The following procedures are suggested:

1. Look at the school report that your school received in May 1974. That report gave you the number of questions, the mean rights, and standard deviations for each objective and for each of the four skill areas.
2. Find the mean rights for any objective or skill area on your school report.
3. On Table 1 in Appendix C, locate the means on that objective or skill area for the state, for districts from your region, for districts from your district wealth category, and for those from your district size category.
4. Compare your school mean (Step 2) for the objective or skill area with the appropriate means for that objective or skill area taken from Table 1 in Appendix C (Step 3).
5. If your school mean is more than two standard errors (taken from Table 1 in Appendix C, with the appropriate means) above or below the means identified in Step 3, you can be confident that your school is different from the average school in the state or in each district category. Such a difference is large enough to warrant interpretation by your professional staff, and you may want to take appropriate action.

For example, if the mean right for your school was *4.61* on *Objective 1*, and your school is located in the Eastern region, is in the $35,000-$44,999 district wealth category, and has a district size of 7,500+, you would go to Table 1 in Appendix C and extract the following means and standard errors for comparison:

a. *Comparison with the State Performance:* Looking at Table 1 in Appendix C, the state mean for *Objective 1* was *4.61* and the standard error was *0.02*. Our hypothetical school was not more than two standard errors above *(4.65)* or below *(4.57)* the state mean, so we would interpret this performance to be not much different from the state performance.

b. *Comparison with the Performance of Schools in the Eastern Region:* Looking at Table 1 in Appendix C, the Eastern region mean for *Objective 1* was *4.65*, and the standard error was *0.04*. Our hypothetical school was not more than two standard errors above *(4.73)* or below *(4.57)* the Eastern region mean, so we would interpret this performance to be not much different from the Eastern region performance.

c. *Comparison with the Performance of Schools in the $35,000-$44,999 District Wealth Category:* Looking at Table 1 in Appendix C, the $35,000-$44,999 district wealth category mean for *Objective 1* was *4.64*, and the standard error was *0.03*. Our hypothetical school was not more than two standard errors above *(4.70)* or below *(4.58)* the mean performance for schools in the $35,000-$44,999 district wealth category. Again, this finding indicates that there is little difference between the school's performance and the performance of schools in its district wealth category.

d. *Comparison with the Performance of Schools in the 7,500+ District Size Category:* Looking at Table 1 in Appendix C, the 7,500+ district size category mean for *Objective 1* was *4.57*, and the standard error was *0.03*. Our hypothetical school was again not more than two standard errors above *(4.63)* or below *(4.51)* the 7,500+ district size category mean, and we would interpret this performance to be not much different from that of schools of similar size.

TABLE I

Performance on Reading Objectives Across the State by Type of School District*

Domain/Objective	Performance By											
	State	Region			District Wealth				District Size			
		Eastern	Western	Metro-politan	$25,000-$34,999	$35,000-$44,999	$45,000-$64,999	$65,000+	1-99	100-2,999	3,000-7,499	7,500+
DOMAIN I—Word Attack Skills	31.17 (0.20)	31.88 (0.71)	31.39 (0.25)	30.59 (0.35)	32.40 (1.10)	31.14 (0.36)	31.85 (0.31)	30.13 (0.44)	31.88 (1.41)	31.33 (0.32)	32.08 (0.41)	30.44 (0.32)
Objective 1—Identifying Spoken Words	4.61 (0.02)	4.65 (0.04)	4.64 (0.02)	4.56 (0.03)	4.66 (0.04)	4.64 (0.03)	4.66 (0.02)	4.53 (0.04)	4.63 (0.08)	4.63 (0.02)	4.67 (0.03)	4.57 (0.03)
Objective 2—Identifying Vowel Sounds	2.65 (0.03)	2.67 (0.13)	2.67 (0.04)	2.60 (0.05)	2.69 (0.06)	2.62 (0.06)	2.74 (0.06)	2.53 (0.06)	3.05 (0.18)	2.64 (0.06)	2.77 (0.07)	2.57 (0.04)
Objective 3—Identifying Silent Letters	3.58 (0.02)	3.62 (0.06)	3.61 (0.03)	3.52 (0.04)	3.70 (0.11)	3.61 (0.03)	3.62 (0.03)	3.48 (0.06)	3.53 (0.09)	3.61 (0.03)	3.67 (0.03)	3.49 (0.05)
Objective 4—Identifying *y* Sounds	3.97 (0.03)	4.14 (0.09)	3.99 (0.03)	3.87 (0.07)	4.19 (0.05)	4.01 (0.04)	4.08 (0.04)	3.76 (0.09)	4.33 (0.12)	4.03 (0.04)	4.13 (0.04)	3.80 (0.07)
Objective 5—Identifying Hard and Soft *c* and *g* Sounds	3.25 (0.02)	3.34 (0.08)	3.25 (0.03)	3.21 (0.04)	3.33 (0.07)	3.22 (0.05)	3.32 (0.04)	3.16 (0.04)	3.21 (0.16)	3.24 (0.04)	3.34 (0.05)	3.20 (0.03)
Objective 6—Identifying Vowel Sounds	2.29 (0.02)	2.39 (0.07)	2.33 (0.03)	2.20 (0.04)	2.50 (0.02)	2.29 (0.04)	2.34 (0.03)	2.21 (0.05)	2.28 (0.11)	2.34 (0.03)	2.44 (0.04)	2.16 (0.04)
Objective 7—Identifying Double Vowel Sounds	2.20 (0.03)	2.27 (0.11)	2.24 (0.04)	2.11 (0.04)	2.46 (0.21)	2.18 (0.05)	2.27 (0.04)	2.08 (0.05)	2.40 (0.28)	2.20 (0.05)	2.25 (0.06)	2.16 (0.03)
Objective 8—Identifying Contraction Compounds	4.02 (0.03)	4.18 (0.07)	4.04 (0.04)	3.93 (0.06)	4.05 (0.31)	3.98 (0.07)	4.14 (0.04)	3.90 (0.06)	4.02 (0.23)	4.05 (0.05)	4.10 (0.05)	3.95 (0.06)
Objective 9—Identifying Syllables	4.60 (0.05)	4.63 (0.15)	4.61 (0.06)	4.57 (0.08)	4.82 (0.26)	4.59 (0.07)	4.68 (0.07)	4.47 (0.10)	4.45 (0.32)	4.60 (0.07)	4.71 (0.11)	4.53 (0.07)

*The first number for each objective is the mean or average number of items correct. The second number (in parentheses) is the standard error of the mean, an indicator of variability of performance on the objective.

TABLE I
(Continued)

Performance on Reading Objectives Across the State by Type of School District*

Domain/Objective	Performance By											
	State	Region			District Wealth				District Size			
		Eastern	Western	Metro-politan	$25,000-$34,999	$35,000-$44,999	$45,000-$64,999	$65,000+	1-99	100-2,999	3,000-7,499	7,500+
DOMAIN II—Vocabulary Skills	6.84 (0.04)	7.15 (0.11)	6.87 (0.06)	6.66 (0.08)	7.10 (0.10)	6.78 (0.08)	7.01 (0.06)	6.63 (0.09)	7.12 (0.24)	6.93 (0.06)	6.97 (0.09)	6.65 (0.07)
Objective 10—Determining Missing Words During Context	3.57 (0.02)	3.68 (0.05)	3.58 (0.03)	3.53 (0.03)	3.65 (0.06)	3.54 (0.04)	3.64 (0.03)	3.50 (0.04)	3.65 (0.13)	3.59 (0.03)	3.62 (0.04)	3.53 (0.03)
Objective 11—Determining Intended Meaning Using Context	3.26 (0.03)	3.48 (0.07)	3.29 (0.04)	3.13 (0.05)	3.45 (0.05)	3.23 (0.05)	3.36 (0.04)	3.12 (0.06)	3.47 (0.12)	3.34 (0.04)	3.34 (0.06)	3.13 (0.05)
DOMAIN III—Comprehension Skills	15.20 (0.15)	15.65 (0.36)	15.38 (0.16)	14.79 (0.32)	16.18 (0.74)	15.29 (0.24)	15.70 (0.21)	14.35 (0.33)	15.05 (0.93)	15.21 (0.19)	15.64 (0.27)	14.94 (0.29)
Objective 12—Answering Questions About Reading Passages	2.34 (0.02)	2.36 (0.04)	2.38 (0.03)	2.28 (0.04)	2.49 (0.05)	2.35 (0.04)	2.42 (0.03)	2.21 (0.04)	2.43 (0.11)	2.36 (0.03)	2.39 (0.05)	2.29 (0.04)
Objective 13—Answering Questions About Reading Passages	3.97 (0.04)	4.13 (0.12)	4.03 (0.04)	3.83 (0.09)	4.30 (0.21)	4.05 (0.07)	4.09 (0.06)	3.71 (0.09)	3.72 (0.20)	4.02 (0.06)	4.14 (0.07)	3.83 (0.08)
Objective 14—Arranging Events Chronologically	1.67 (0.03)	1.73 (0.07)	1.67 (0.04)	1.66 (0.04)	1.65 (0.09)	1.66 (0.05)	1.74 (0.04)	1.59 (0.05)	1.77 (0.23)	1.62 (0.04)	1.71 (0.06)	1.70 (0.04)
Objective 15—Determining Logical Endings for Short Stories	1.97 (0.03)	2.01 (0.07)	2.01 (0.03)	1.90 (0.05)	2.12 (0.14)	1.97 (0.05)	2.04 (0.04)	1.86 (0.05)	1.82 (0.16)	1.95 (0.04)	2.02 (0.05)	1.95 (0.04)
Objective 16—Drawing Inferences from Reading Passages	3.83 (0.04)	3.95 (0.10)	3.85 (0.04)	3.74 (0.09)	4.06 (0.15)	3.82 (0.06)	3.94 (0.06)	3.66 (0.09)	3.98 (0.25)	3.83 (0.05)	3.90 (0.07)	3.77 (0.08)

*The first number for each objective is the mean or average number of items correct. The second number (in parentheses) is the standard error of the mean, an indicator of variability of performance on the objective.

TABLE I
(Continued)

Performance on Reading Objectives Across the State by Type of School District*

Domain/Objective	Performance By											
	State	Region			District Wealth				District Size			
		Eastern	Western	Metro-politan	$25,000-$34,999	$35,000-$44,999	$45,000-$64,999	$65,000+	1-99	100-2,999	3,000-7,499	7,500+
Objective 17—Summarizing Plots of Short Stories	1.42 (0.02)	1.46 (0.05)	1.44 (0.02)	1.38 (0.04)	1.55 (0.11)	1.45 (0.03)	1.47 (0.03)	1.32 (0.04)	1.33 (0.10)	1.42 (0.03)	1.48 (0.03)	1.40 (0.04)
DOMAIN IV—Application Skills	14.83 (0.18)	15.45 (0.49)	15.13 (0.20)	14.18 (0.36)	15.67 (0.99)	14.77 (0.36)	15.53 (0.22)	13.83 (0.41)	15.90 (1.34)	14.84 (0.24)	15.56 (0.32)	14.35 (0.34)
Objective 18—Arranging Words in Alphabetical Order	2.93 (0.04)	3.01 (0.09)	3.02 (0.05)	2.78 (0.09)	3.09 (0.06)	2.91 (0.08)	3.09 (0.06)	2.72 (0.09)	3.34 (0.50)	2.92 (0.05)	3.10 (0.09)	2.82 (0.08)
Objective 19—Using Dictionary Skills	3.36 (0.07)	3.61 (0.20)	3.44 (0.07)	3.14 (0.14)	3.70 (0.50)	3.35 (0.14)	3.57 (0.08)	3.04 (0.15)	3.68 (0.40)	3.37 (0.10)	3.57 (0.10)	3.20 (0.13)
Objective 20—Interpreting Table of Contents	4.60 (0.05)	4.79 (0.13)	4.67 (0.05)	4.42 (0.10)	4.80 (0.15)	4.57 (0.10)	4.82 (0.05)	4.30 (0.11)	4.84 (0.12)	4.59 (0.06)	4.85 (0.09)	4.45 (0.09)
Objective 21—Following Written Directions	0.90 (0.01)	0.92 (0.01)	0.90 (0.01)	0.88 (0.01)	0.90 (0.02)	0.91 (0.02)	0.91 (0.01)	0.87 (0.01)	0.89 (0.04)	0.91 (0.01)	0.91 (0.02)	0.87 (0.01)
Objective 22—Following Map Directions	0.64 (0.01)	0.65 (0.02)	0.64 (0.01)	0.63 (0.02)	0.67 (0.06)	0.63 (0.02)	0.66 (0.02)	0.61 (0.02)	0.73 (0.07)	0.63 (0.01)	0.65 (0.02)	0.64 (0.02)
Objective 23—Solving Word Problems—Addition	0.77 (0.01)	0.78 (0.03)	0.78 (0.01)	0.76 (0.01)	0.79 (0.01)	0.78 (0.01)	0.79 (0.01)	0.74 (0.01)	0.76 (0.07)	0.77 (0.01)	0.78 (0.01)	0.77 (0.01)
Objective 24—Solving Word Problems—Subtraction	0.72 (0.01)	0.73 (0.03)	0.74 (0.01)	0.70 (0.02)	0.75 (0.01)	0.72 (0.01)	0.75 (0.01)	0.69 (0.02)	0.71 (0.11)	0.71 (0.02)	0.76 (0.01)	0.72 (0.02)
Objective 25—Selecting Correct Operations for Solving Word Problems	0.91 (0.02)	0.95 (0.04)	0.94 (0.03)	0.87 (0.04)	0.95 (0.25)	0.89 (0.04)	0.96 (0.03)	0.86 (0.04)	0.95 (0.22)	0.93 (0.03)	0.94 (0.05)	0.88 (0.03)

*The first number for each objective is the mean or average number of items correct. The second number (in parentheses) is the standard error of the mean, an indicator of variability of performance on the objective.

REPORTS AND PRODUCTS

The following reports and products contain the results of the 1973-74 Oregon Statewide Assessment Program:

The *Technical Report* contains in three volumes the history, philosophy, description, procedures, results and recommendations of the 1973-74 reading assessment. This report was prepared as a comprehensive record for the assessment staff and educational researchers.

The *General Report* is a summary of the *Technical Report*, intended for such audiences as legislators, Department of Education program directors and staff, local district personnel, the general public, and media personnel who would further disseminate the information.

The *Executive Summary*, like the *General Report*, is for a non-technical audience. The most significant findings and recommendations are highlighted in this document.

The *Brochure* is a one-sheet foldout providing an overview of the 1973-74 Oregon assessment program.

Press Releases publicizing the 1973-74 Oregon Statewide Assessment Program and its results were prepared for publication in major newspapers throughout the state. These press releases summarize the most noteworthy outcomes of the assessment effort.

A short *Slide Tape Presentation* provides an overview of the Oregon assessment program and is directed to educators, legislative audiences and the public.

The *Audiovisual Presentation* is a short news film clip prepared for television. This presentation highlights results of the 1973-74 Oregon assessment effort and is directed toward the public.

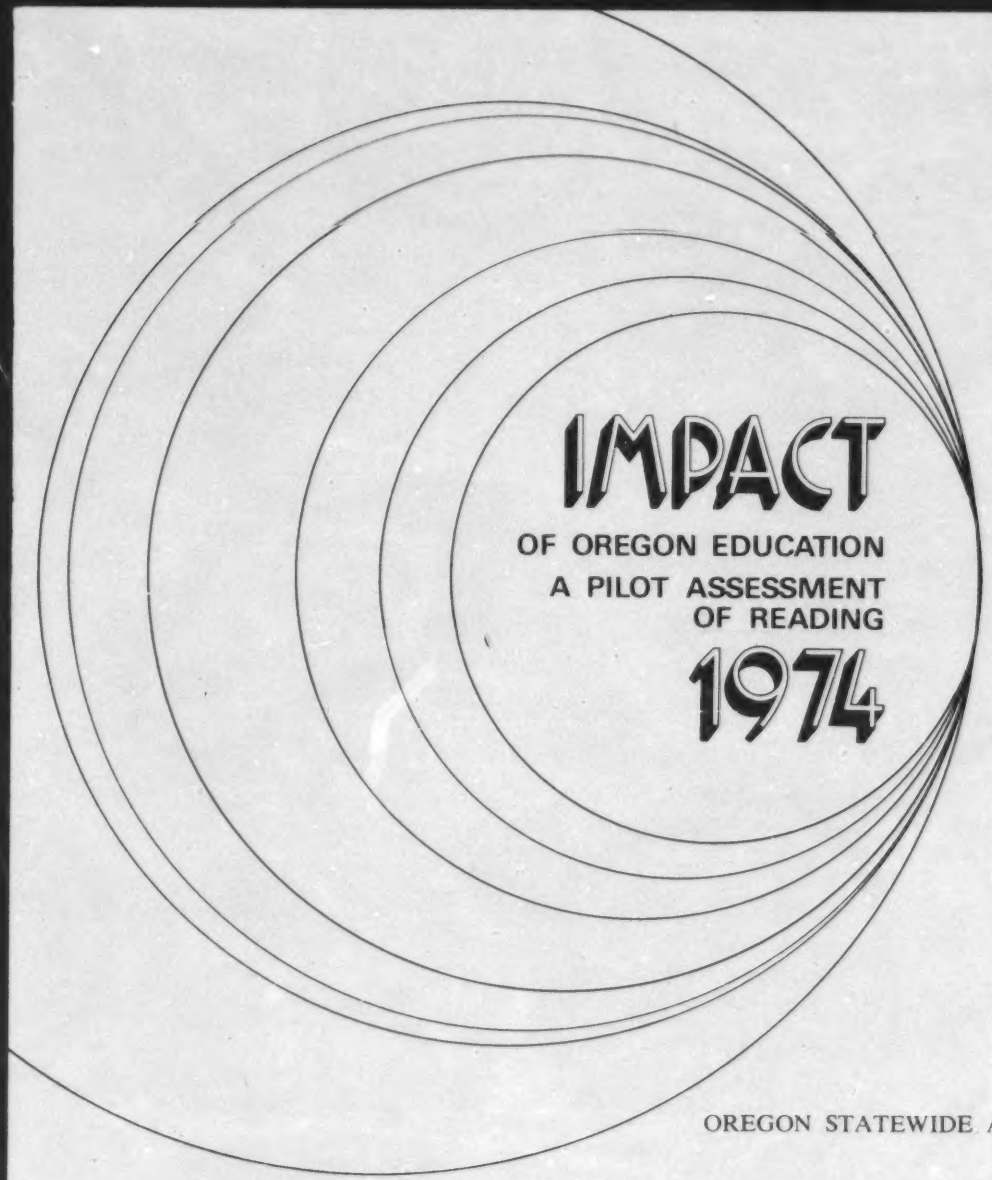
Copies of the *General Report* and *Executive Summary* are available. Write or call:

Documents Clerk
Oregon Department of Education
942 Lancaster Drive NE
Salem, Oregon 97310

Phone: 378-3589

Questions about the Oregon Statewide Assessment Program are welcomed and should be sent to:

Director
Statewide Assessment Program
Oregon Department of Education
942 Lancaster Drive NE
Salem, Oregon 97310



OREGON STATEWIDE ASSESSMENT PROGRAM

EXECUTIVE SUMMARY

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Oregon Statewide Assessment

November 1974

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I. BACKGROUND

Oregon Statewide Assessment, a management-related priority, was initiated in 1973 by the State Superintendent of Public Instruction and the State Legislature.

Both parties wanted to obtain student performance data to assist them and other audiences in making informed educational policies. The questions and concerns of state-level decision makers were primary considerations in determining what data to collect. All the other audiences interested in Oregon's educational opportunities were addressed whenever possible. They included local educators, citizens, university faculty, and members of professional organizations and educational advisory committees.

Even for state-level audiences, differences between the amount of information wanted and the facts available were vast indeed. One of the first far-reaching decisions the assessment staff had to make was what data to collect, given the restraints of present resources in terms of time, money, personnel and the present status of statewide assessments.

With the cooperative participation of educators and the public throughout the state, the decision was made to assess reading performance at the fourth grade level with tests designed to measure to what degree children could attain specific reading objectives.

The assessment is but one part of a comprehensive planning process to insure that state-level decision makers have appropriate information on which to base critical decisions. Although educational assessments have been conducted in Oregon before, this is the first time citizens and educators from throughout the state have been significantly involved in the planning and implementing phases. Emphasis has been placed on providing important information in a useful form.

This executive summary highlights the most significant findings and recommendations of the assessment.

II. PROCEDURES

Work on the 1974 Oregon Statewide Assessment Program began in September 1973 and culminated in a set of reports and related informational packets in November 1974. The assessment plan involved the following procedures:

1. *Selection of Objectives*

   Groups throughout the state, including the Oregon Right-to-Read Advisory Committee, Intermediate Education District (IED) assessment coordinators, and public school educators, participated in the review and selection of 25 important reading objectives, delineating skills taught in Oregon classrooms. Those 25 objectives formed the basis for the test used in the 1974 Oregon assessment.

2. *Item Selection*

   Models of prototype items were obtained from existing sources to properly cover the 25 objectives identified as important for reading education in Oregon. These items were reviewed by the Oregon Department of Education staff and the Oregon Right-to-Read Advisory Committee. Recommendations based on these reviews led to the development of a 96-item reading test.

3. *Sampling*

   The decision was made to use a scientifically drawn sample of fourth grade pupils for the assessment rather than to attempt to test every fourth grade pupil in the state. Just as in a national opinion poll, a relatively small number of persons could participate, but the results could be reported as if everyone had been tested. This procedure allowed the assessment staff to collect very accurate information efficiently and economically. The 102 sample schools were selected on the basis of geographical location, and school district wealth and size.

4. *Assessment Implementation*

   Test materials were shipped to all Oregon IED assessment coordinators who verified the completeness of each shipment and transmitted the appropriate materials to each sample school. The teachers administered the assessment, provided descriptive information about each tested student, and collected the materials for shipment to the IED assessment coordinator who returned them for scoring, analysis and reporting.

5. *Analysis*

   Because the various audiences for Oregon Statewide Assessment reports had different

information needs, the assessment data was subjected to several kinds of statistical analyses. The analyses addressed two basic questions:

- What were the identified characteristics of fourth grade students in the sample?
- How did children perform on the test?

6. *Review and Interpretation*

Following the statistical analysis of the test data, several review panels were brought together to interpret results and to make recommendations for action. Review panels included teachers, reading specialists, principals, superintendents, and parents from throughout the state. Also on the panels were staff members from the Oregon Department of Education, the Northwest Regional Educational Laboratory, and the Research Triangle Institute of North Carolina. The significant involvement of parents and educators in interpreting assessment data is unique to the Oregon Statewide Assessment Program.

III. RESULTS

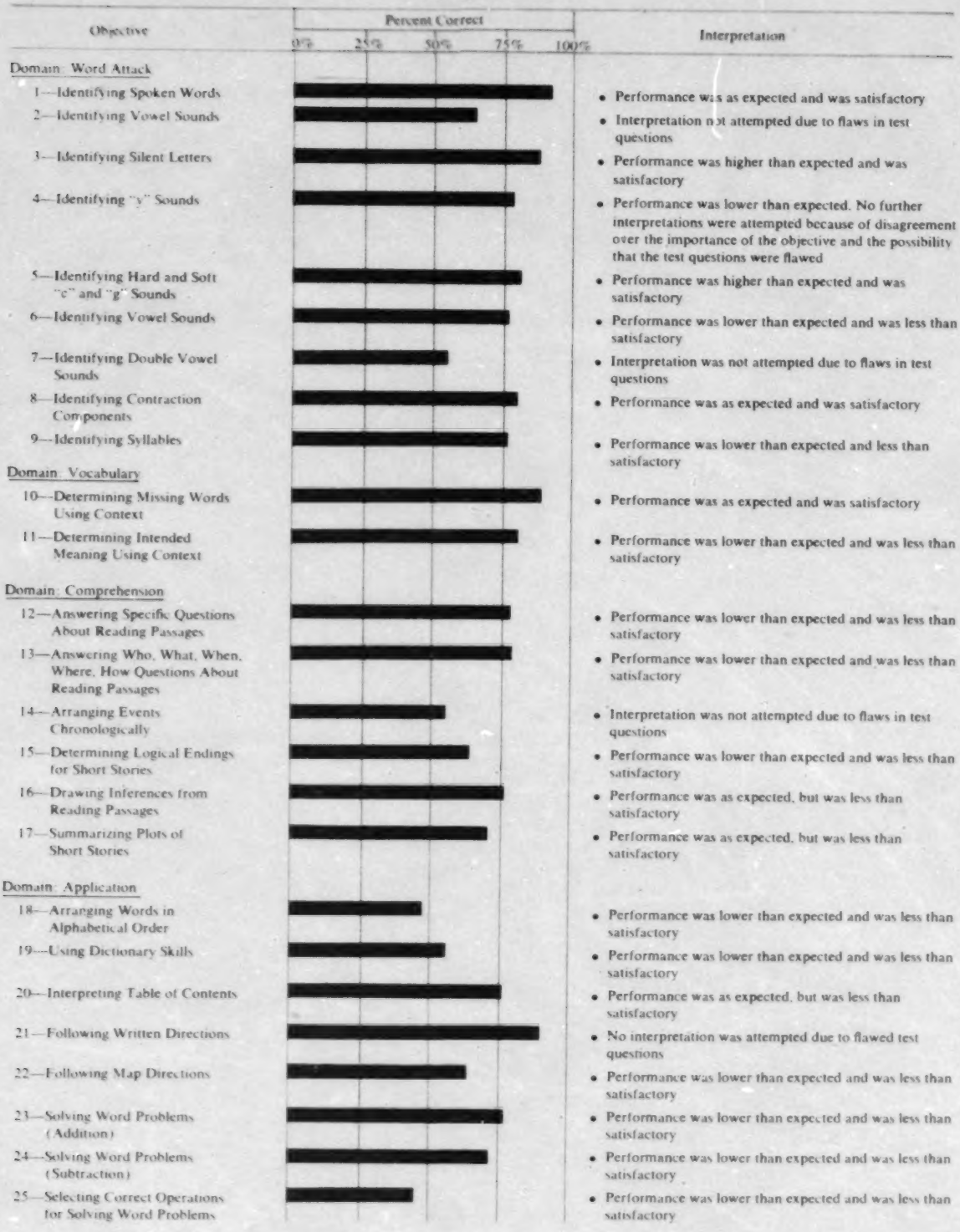
Although most people in our society readily agree that reading is an important skill, and it is prominently listed among the learner skills that comprise Oregon's educational goals and instructional priorities, "reading" does not mean the same thing to everyone. For this assessment, a single definition of reading was not attempted. Instead, educators from across the state were asked to establish priorities among a list of 47 reading objectives. Of these, the 25 top-rated objectives were measured on the assessment test, and grouped into four domain areas: word attack skills, vocabulary skills, comprehension skills and application skills.

There are many obstacles to learning, however, other than the difficulties of acquiring skills and knowledge. These additional factors are physical and mental, economic and sociological, inherited and environmental. Information on these factors is essential to the analysis and understanding of student performance results. Therefore, several other types of information (called "reporting variables") were collected either through the sampling design or through questions asked of teachers in participating schools. These reporting variables included:

- Region of the state in which the child's school was located
- Wealth of the district in which the child attended school
- Size of the district in which the school was located
- Sex of the child
- Age of the child
- Race of the child
- Whether the child was participating in a compensatory education program financed by Title I of the Elementary and Secondary Education Act
- Whether the child had been diagnosed by a teacher or another educational specialist as needing remedial work in reading
- Whether the child was receiving corrective or remedial services of some type

A summary of the performance of fourth grade students in the state in each of the 25 objectives in the four domain areas is contained in the following table.

STATE PERFORMANCE


Objective
Percent Correct
0%
25%
50%
75%
100%
Interpretation
Domain: Word Attack
1—Identifying Spoken Words
2—Identifying Vowel Sounds
3—Identifying Silent Letters
4—Identifying "y" Sounds
5—Identifying Hard and Soft "c" and "g" Sounds
6—Identifying Vowel Sounds
7—Identifying Double Vowel Sounds
8—Identifying Contraction Components
9—Identifying Syllables
Domain: Vocabulary
10—Determining Missing Words Using Context
11—Determining Intended Meaning Using Context
Domain: Comprehension
12—Answering Specific Questions About Reading Passages
13—Answering Who, What, When, Where, How Questions About Reading Passages
14—Arranging Events Chronologically
15—Determining Logical Endings for Short Stories
16—Drawing Inferences from Reading Passages
17—Summarizing Plots of Short Stories
Domain: Application
18—Arranging Words in Alphabetical Order
19—Using Dictionary Skills
20—Interpreting Table of Contents
21—Following Written Directions
22—Following Map Directions
23—Solving Word Problems (Addition)
24—Solving Word Problems (Subtraction)
25—Selecting Correct Operations for Solving Word Problems
• Performance was as expected and was satisfactory
• Interpretation not attempted due to flaws in test questions
• Performance was higher than expected and was satisfactory
• Performance was lower than expected. No further interpretations were attempted because of disagreement over the importance of the objective and the possibility that the test questions were flawed
• Performance was higher than expected and was satisfactory
• Performance was lower than expected and was less than satisfactory
• Interpretation was not attempted due to flaws in test questions
• Performance was as expected and was satisfactory
• Performance was lower than expected and less than satisfactory
• Performance was as expected and was satisfactory
• Performance was lower than expected and was less than satisfactory
• Performance was lower than expected and was less than satisfactory
• Performance was lower than expected and was less than satisfactory
• Interpretation was not attempted due to flaws in test questions
• Performance was lower than expected and was less than satisfactory
• Performance was as expected, but was less than satisfactory
• Performance was as expected, but was less than satisfactory
• Performance was lower than expected and was less than satisfactory
• Performance was lower than expected and was less than satisfactory
• Performance was as expected, but was less than satisfactory
• No interpretation was attempted due to flawed test questions
• Performance was lower than expected and was less than satisfactory
• Performance was lower than expected and was less than satisfactory
• Performance was lower than expected and was less than satisfactory
• Performance was lower than expected and was less than satisfactory

Briefly, the results of the assessment included the following noteworthy outcomes:

- The general performance of fourth grade students across the state was good, but not excellent. They did perform better in some areas than others.
- The performance of fourth grade pupils across the state was lower for comprehension and application skills than for word attack and vocabulary skills. The reading specialists on the review panels reported that these findings were not surprising because primary grade instruction generally stresses recognizing letter sounds and words more than understanding and using what is read. But they felt children beginning in the first grade, should have practice making inferences, summarizing the main plot of a story, putting events in chronological order, and otherwise learning to think about the content they are reading. The reading specialists also thought that children should be provided more opportunities to practice reading skills associated with all learning activities.
- The relative performance of the district types was consistent across the four domains. Although there was a trend toward lower scores in the large districts, the wealthy districts and metropolitan districts, the differences among types of districts were relatively small in terms of numbers of test items correct. Review panel members did not think the differences were particularly noteworthy in light of the larger differences in performance observed in relation to the characteristics of students.
- The student characteristics of sex and age also showed slight but consistent trends for boys and older children to score lower in each domain. On this assessment, more boys than girls were older, so the two characteristics may identify many of the same children with reading problems. That is, older boys may have reading problems. This finding may be a valuable aid to teachers watching for children with reading problems.
- The five percent of the fourth grade children in Oregon who were non-White did less well on the assessment than the White children. These children were also more likely to be in ESEA Title I programs, and receiving corrective or remedial assistance in reading.
- The most significant differences in performance between the state average and the averages for different groupings of students were found for these categories: (1) children participating in ESEA Title I compensatory education programs, and (2) children diagnosed as needing corrective or remedial work. Low scores by these children, however, do not imply that the federal assistance or corrective reading programs have not been successful. In fact, the assessment information points toward a need to continue and reinforce remedial and corrective reading programs.
- The review panel members concluded that resources for reading should be allocated to improve the opportunities for all children to learn the specific skills which were shown to be deficient by the assessment.

IV. RECOMMENDATIONS

Many positive outcomes emerged from the assessment. Most noteworthy was the high performance of most fourth graders on many objectives in all four skill areas (domains). In making recommendations, however, the members of the review panels thought that their best contribution would be to suggest actions or changes that appeared important to them. It should not be inferred that because all recommendations call for change, reading education in Oregon is deficient. On the contrary, the high performance of students on most objectives provides evidence that reading education in Oregon is effective.

The recommendations listed below represent the best offerings of the dedicated persons who served on the review panels. Since relatively few people were involved in the reviews it is quite possible that others may have different or additional recommendations.

Recommendations for Action

- Recommendations to the Classroom, School and District Levels:

1. A special effort should be made to include content material which is interesting to male, non-White, Title I, or remedial children if such children are present in the classroom.
2. Teachers, district and IED personnel should review the textbooks and other reading materials to insure that content areas which are considered important but which are poorly learned by fourth graders (as demonstrated by the assessment results) are included.

- Recommendations to the Oregon Department of Education and State Board of Education:

3. Experimental studies should be conducted to identify the types of remedial activities which work best, and determine why they are effective. (Would involve action by classroom, school and district personnel also.)
4. Experimental studies should also be conducted to attempt to equalize differences by sex and age. Some areas of investigation might include variables such as: (a) placement in class by sex, or age, or both; (b) curriculum modifications; (c) promotion of students to new grades; and (d) the number of male elementary teachers.
5. A standard form should be developed and centrally stored to provide academic information about transferring students. (Would involve action by the State Legislature and school district personnel.)
6. Teacher inservice workshops should be conducted on interpretation of test results (stressing both student strengths and weaknesses), and implementation of appropriate instructional procedures. (Would involve action by school and district personnel.)
7. A literature search should be made to identify effective educational programs for minorities.
8. The State Textbook Commission should commit funds to the evaluation of textbooks incorporating the results of the statewide assessment. Textbooks adopted for use would be required to include content on those skills identified by the assessment as weak.

- Recommendations to the Legislature:

9. Grant funds to provide services to the approximately four percent of Oregon students who have been diagnosed as needing remedial/corrective help but who are not receiving it.
10. Make resources available for academic diagnosis of all students transferring into one system from another.
11. Provide seed money for innovative programs to increase parents' involvement in the education of their children.

- Recommendations to Parents and the Public:

12. Parents should encourage and provide the model for a variety of reading activities, particularly with boys, emphasizing application skills.
13. Parents should be made aware that they are "educators," too. (Teachers and other professional "educators" must also accept this idea.)